BULLETIN OF THE

Pan American Union

A VENEZUELAN COLONIAL CHURCH

DOCUMENTS

FEBRUARY 1948

GOVERNING BOARD

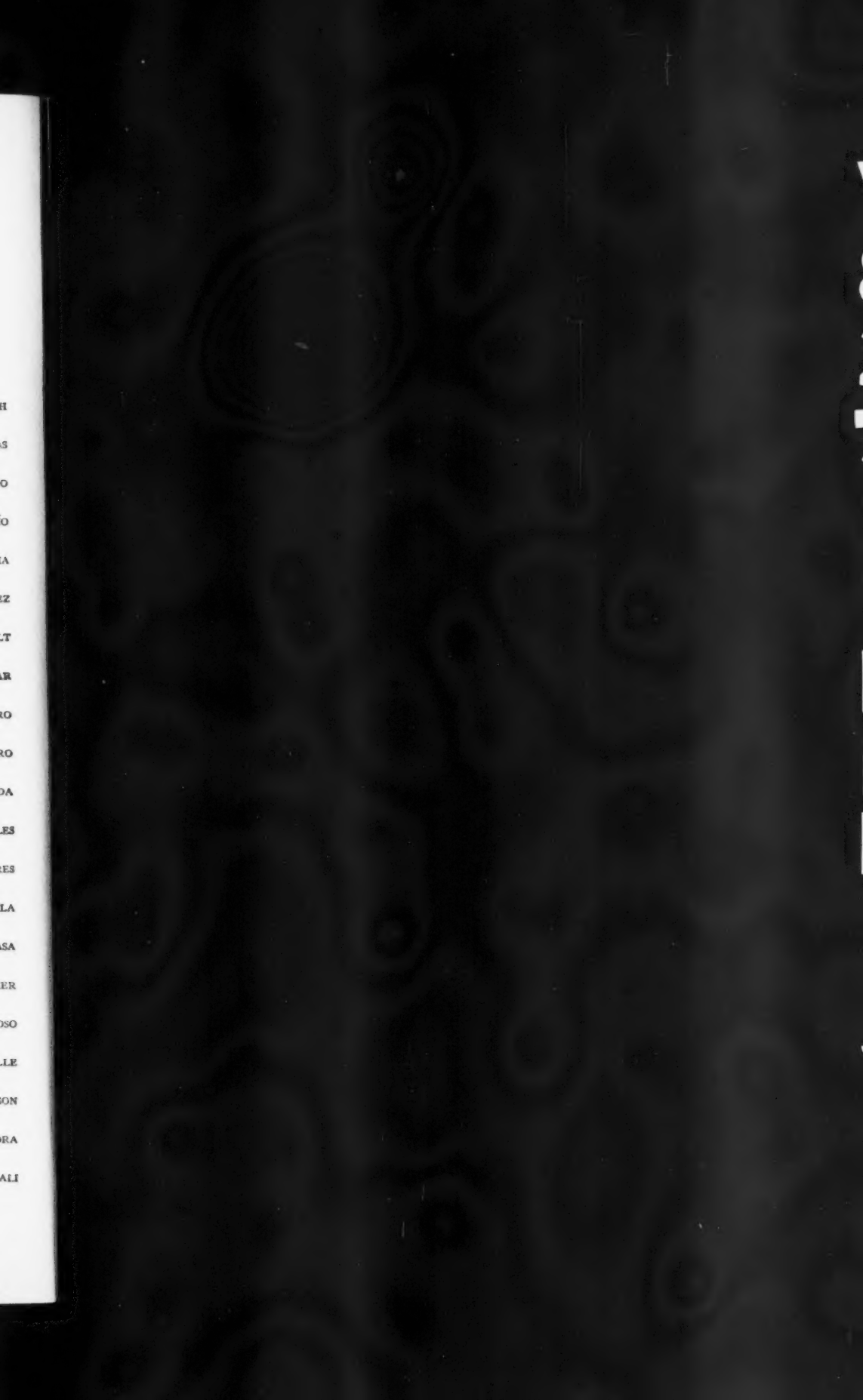
OF THE PAN AMERICAN UNION

WASHINGTON, D. C.

JUAN BAUTISTA DE LAVALLE, *Chairman*

JOSÉ A. MORA, *Vice Chairman*

ARGENTINA	ÓSCAR IVANISSEVICH
1815 Q Street	
BOLIVIA	RICARDO MARTÍNEZ VARGAS
Investment Building	
BRAZIL	JOSÉ MARIA BELLO
Wardman Park Hotel	
CHILE	FÉLIX NIETO DEL RÍO
1736 Massachusetts Avenue	
COLOMBIA	ANTONIO ROCHA
1609 Twenty-second Street	
COSTA RICA	FRANCISCO DE PAULA GUTIÉRREZ
2112 S Street	
CUBA	GUILLERMO BELT
2630 Sixteenth Street	
DOMINICAN REPUBLIC	JOAQUÍN E. SALAZAR
4500 Sixteenth Street	
ECUADOR	COLÓN ELOY ALFARO
Mayflower Hotel	
EL SALVADOR	HÉCTOR DAVID CASTRO
2400 Sixteenth Street	
GUATEMALA	FRANCISCO LINARES ARANDA
1614 Eighteenth Street	
HAITI	JOSEPH D. CHARLES
4842 Sixteenth Street	
HONDURAS	JULIÁN R. CÁCERES
4715 Sixteenth Street	
MEXICO	LUIS QUINTANILLA
2501 Q Street	
NICARAGUA	GUILLERMO SEVILLA SACASA
1627 New Hampshire Avenue	
PANAMA	EUGENIO J. CHEVALIER
2862 McGill Terrace	
PARAGUAY	GUILLERMO ENCISO VELLOSO
5500 Sixteenth Street	
PERU	JUAN BAUTISTA DE LAVALLE
Mayflower Hotel	
UNITED STATES	WILLIAM DAWSON
Department of State	
URUGUAY	JOSÉ A. MORA
1025 Connecticut Avenue	
VENEZUELA	GONZALO CARNEVALI
2445 Massachusetts Avenue	



THE PAN AMERICAN UNION

WASHINGTON, D. C.

ALBERTO LLERAS, *Director General*

WILLIAM MANGER, *Assistant Director*

THE PAN AMERICAN UNION, now 57 years old, is an international organization created and maintained by the twenty-one American Republics: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, the United States, Uruguay, and Venezuela. Originally known as the International Bureau of the American Republics, it was established in 1890 in accordance with a resolution passed April 14 of that year by the First International Conference of American States, which convened at Washington in October 1889. April 14 is celebrated annually throughout the Americas as Pan American Day.

The work of the Union was greatly expanded by resolutions of the Second Conference, held at Mexico City in 1901–2; the Third, at Rio de Janeiro in 1906; the Fourth, at Buenos Aires in 1910; the Fifth, at Santiago, Chile, in 1923; the Sixth, at Habana in 1928; the Seventh, at Montevideo in 1933; the Eighth, at Lima in 1938; and by other inter-American conferences. The creation of machinery for the orderly settlement of inter-American disputes is one of the outstanding achievements of the Pan American system, but more important still is the continental public opinion that demanded such procedure.

PURPOSE AND ORGANIZATION

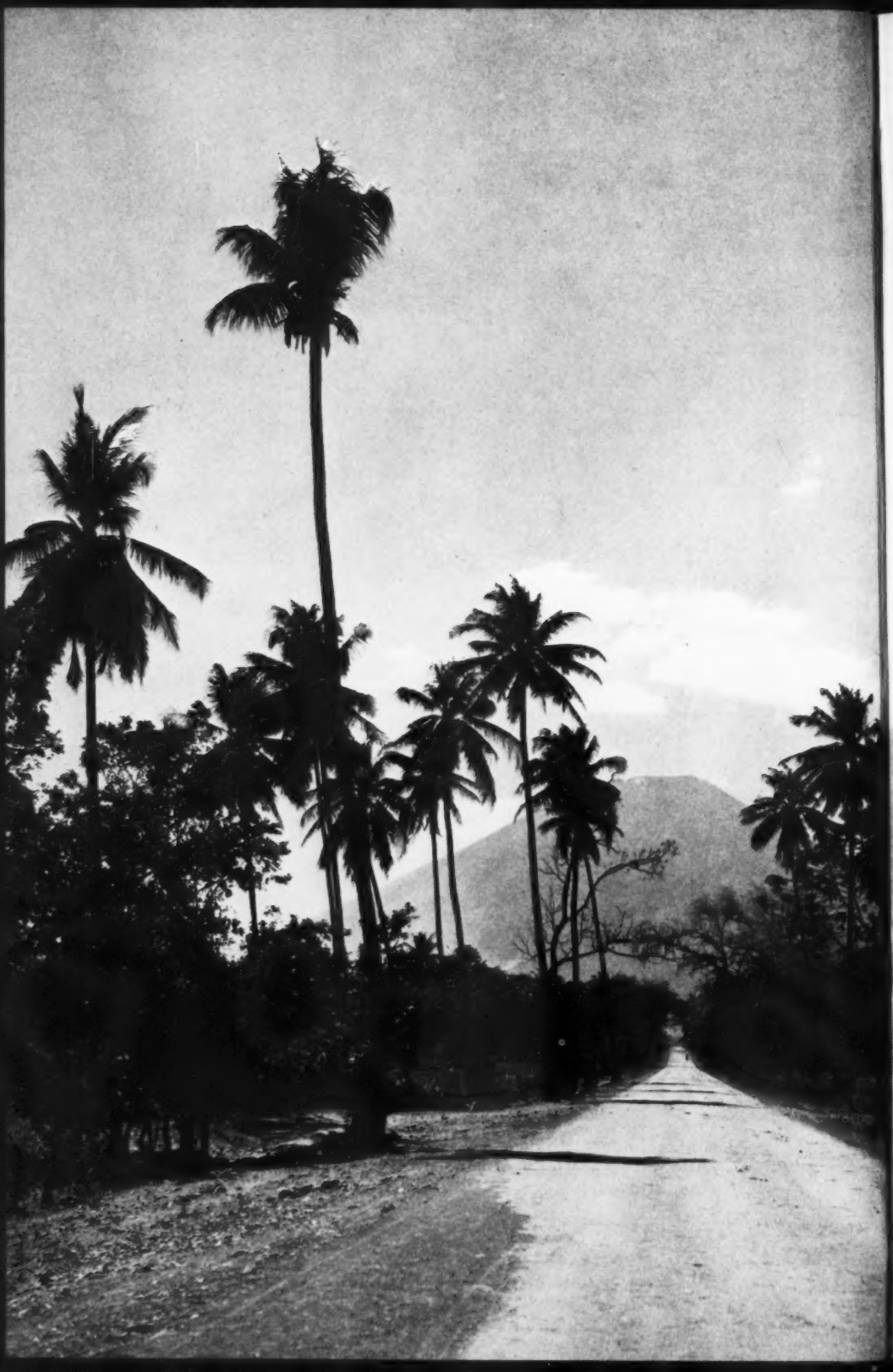
The purpose of the Pan American Union is to promote friendship and close relations among the Republics of the American Continent and peace and security within their borders by fostering constructive cooperation among them. The Union is supported by annual contributions from all the countries, in amounts proportional to population, and its services are freely available to officials and private citizens alike. Its affairs are administered by a Director General and an Assistant Director, elected by and responsible to a Governing Board composed of one member from each American Republic.

ADMINISTRATIVE DIVISIONS

The administrative departments of the Pan American Union are organized to carry out the purposes for which it was created. There are special offices dealing with foreign trade, statistics, economics, intellectual cooperation, music, juridical matters, agricultural cooperation, travel, and labor and social information. All these offices maintain close relations with official and unofficial bodies in the countries members of the Union. The Columbus Memorial Library contains 138,500 volumes and 2,400 maps. The BULLETIN of the Pan American Union, published monthly in English, Spanish, and Portuguese, is the official organ of the institution. For a list of other publications of the Union, see the inside back cover.

PAN AMERICAN CONFERENCES

The Pan American Union also serves as the permanent organ of the International Conferences of American States, usually referred to as the Pan American Conferences. In addition to preparing the programs and regulations, the Union gives effect to the conclusions of the Conferences by conducting special inquiries and investigations and by convening or arranging for special or technical conferences in the intervals between the International Conferences.



Contents—February 1948

	Page
VENEZUELAN COLONIAL CHURCH (print by Felipe Sánchez, from "Tópicos Shell de Venezuela")	Cover
INDIANS IN COSTA RICA *Doris Stone*	61
RÓMULO GALLEGOS, PRESIDENT OF VENEZUELA	70
DR. JOSÉ MARIA BELLO, REPRESENTATIVE OF BRAZIL ON THE GOVERNING BOARD OF THE PAN AMERICAN UNION	72
INDÉPENDANCE D'HAÏTI *Antoine Bervin*	74
THE VOTING PROCEDURE IN INTER-AMERICAN CONFERENCES *Charles G. Fenwick*	78
THE ASSEMBLY OF LIBRARIANS OF THE AMERICAS *Marietta Daniels*	80
THE EARTHQUAKE PROBLEM IN THE WESTERN HEMISPHERE (Part I) *Edward P. Hollis*	86
IN OUR HEMISPHERE—XIV Some New World Contributions to Good Eating	101
MATERIAL FOR PAN AMERICAN DAY—APRIL 14, 1948	108
PAN AMERICAN UNION NOTES:	
Inter-American Economic and Social Council	109
Special events at the Pan American Union	109
PAN AMERICAN NEWS:	
National Economic Council in Bolivia	111
Dominican Central Bank and currency changes	111
Venezuela's program for improvement of port areas	112
Committees of standards for Mexican industry	112
Guatemalan import tariff	113
Brazilian hydroelectric project	113
Protection for Guatemalan weavers	113
Ecuador receives loan for waterworks	114
Inter-American fellowships	115
Housing plans for the Mexico City area	116
The UNESCO Conference in Mexico	117
Brazilian vocational school principals	117
Workers' University in Venezuela	117
Art and literature awards in Argentina	118
Faculty club for Caracas College of Medicine	118
We see by the papers that—	118

(The contents of previous issues of the BULLETIN OF THE PAN AMERICAN UNION can be found in the "Readers' Guide" in your library)

ILLUSTRATION AT SIDE: THE INTER-AMERICAN HIGHWAY IN EL SALVADOR (courtesy of the Public Roads Administration)

Courtesy of American Forests

WHITE OAK FOREST, COSTA RICA

Some distance south of San José, this mountain forest of magnificent trees parallels the Inter-American Highway for about thirty miles. It averages a mile and a half in width.

BULLETIN OF THE PAN AMERICAN UNION

VOL. LXXXII, No. 2 FEBRUARY 1948

Indians and Costa Rica

DORIS STONE

COSTA RICA is part of the Central American mainland, the western neighbor of the Republic of Panama. Archeological and historical reports bear evidence to the fact that Costa Rica has always had Indians, and despite popular belief to the contrary, Costa Rica still has Indians, as part of the government's actual educational program substantiates. On the whole, however, it has ever been a land little known to the outsider.

Archeologically, Costa Rica is fabulously rich, boasting gold objects of unexcelled workmanship. It is curious that in a country where literally no gold mine of any importance has been found to date gold figures by pre-Columbian craftsmen abound. Figures of people, of animals, of birds, fish, and reptiles, as well as heavy breastplates, head-bands, beads, and fish-hooks lie buried just under the surface of the earth or in ancient graves on rugged hillsides. A hundred thousand dollars' worth of gold, considering only the intrinsic value of the figures, was taken out of a single burial place in southeastern Costa Rica. In this section, on the Pacific side of the Osa Peninsula, modern man has brought slash lines and trained technicians to fish fine gold dust and occasional gold objects out of the sea sand when the tide is low.

What does all this mean? The art of metallurgy has always been a highly valued one, from the time of the earliest European and Asiatic civilizations on. In America, it reached its highest development in the south, amongst the relatively little known cultures of Colombia and of the spectacular Peruvian plateau. And, possibly as an original extension from the south, or possibly as the result of trade or tribal migrations, the art of metallurgy, so complicated as to include the use of copper alloys and three kinds of gold in a single ornament, reached the Central American mainland, where it attained its height in

This talk was given in the Centro Cultural Costarricense-Norteamericano, San José, Costa Rica, on June 12, 1947.

Courtesy of the Costa Rican Tourist Commission

COSTA RICA

This Central American Republic, lying between Nicaragua and Panama, has for a major part an elevated table land from 3,000 to 6,000 feet above the sea. Its chief mountains are mostly volcanic, the highest peak being Chirripó (13,000 feet). Of the various Indian tribes, the Borucas are to be found in the southeast part of the country, the Chorotega-Mangues on the Nicoya Peninsula, the Guatusos on the northern and western boundaries, the Chirripó in the northwest, and the Bribrí in the southern mountains. The Nicoya Peninsula is the large one to the west, the Osa Peninsula the smaller one to the east.

eastern Costa Rica, and became gradually of less importance in the more western regions outside of Costa Rican boundaries.

Green stone pendants form yet another extraordinary phase of Costa Rican prehistory. Made of fluorite, talc, or even jadeite (American jade), these ornaments appear in the shape of beads, and of figures akin to those of gold, and as exact copies in miniature of everyday household objects such as vessels, axes, and rattles, as well as portrait-like ceremonial heads. The jadeite figures are carved and polished, carved with stone implements and polished with stone implements and fine sand as well as with wax from forest bees. Unlike the gold work, the jadeites have their center in the west, farther removed from South America and nearer to the great cultures of Mexico, which invaded neighboring Nicaragua, and nearer to the mysterious Maya of western Central America.

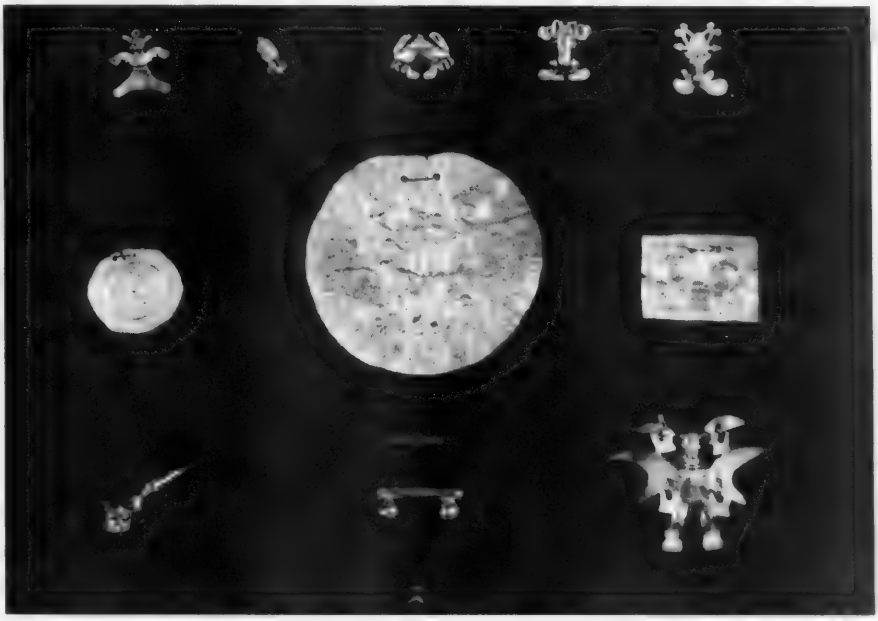
But it is not only the finding of small objects that makes the cultural past of Costa Rica important. Stone faces and figures,

portrait-like with marked individual characteristics, and stone heads and figures carefully executed lie scattered in the rain-forests, or buried in stone-lined graves, especially on the Caribbean side of the country. All of these things are obvious. They talk for themselves, telling their uses as adornments or ceremonial offerings and representations.

In the southeast, however, a mystery element appears, so large and apparent in itself as to become more mysterious because no satisfactory explanation of its presence has been made to date. This is a complex of stone spheres, perfectly executed round balls of solid rock ranging from five inches to seven feet in circumference. What is yet more amazing, these balls are found in a flood-plain area, a region where no stone, outside of small river rocks, occurs in a natural state. Notwithstanding the size and weight of these spheres, still no Spanish account is known to relate their existence, much less to suggest their purpose, and the present-day Indians of the vicinity only shrug their shoulders and murmur apathetically, "*A saber?*" "Who knows? We don't," when pressed for an answer.

This is pre-history, unknown and unexplained in its greater part, left for the research of the archeologist and the musings of the visionaries.

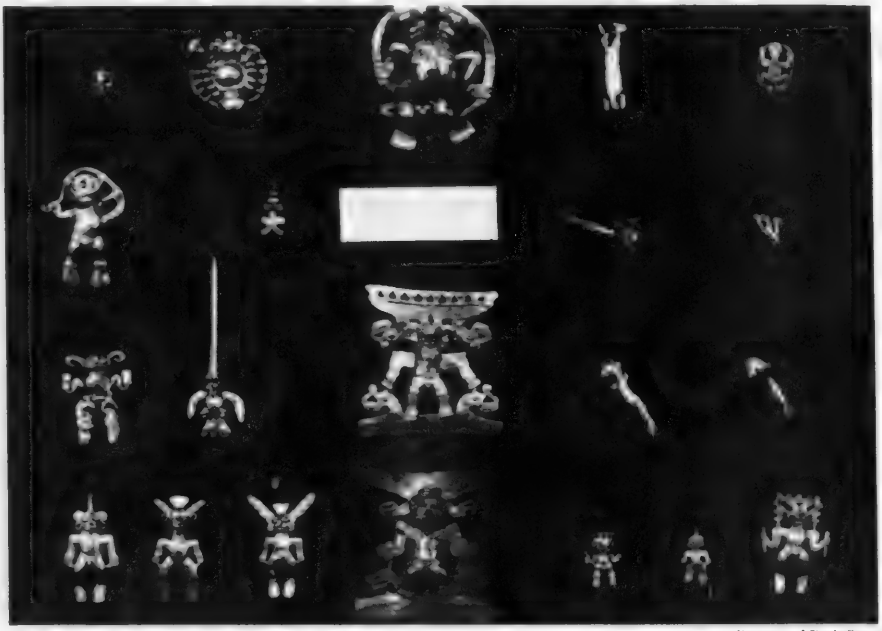
The Spanish Conquest brought other questions to Costa Rica. It brought a new sense of values and a type of civilization



Courtesy of Doris Stone

PRE-COLUMBIAN GOLD FIGURES

Although there are no gold mines of any importance in Costa Rica, numerous gold figures of animals, people, birds, fish, and reptiles, as well as breastplates, head-bands, beads, and fishhooks have been found in ancient graves.



Courtesy of Doris Stone

PRE-COLUMBIAN GOLD FIGURES

Archeologically speaking, Costa Rica is fabulously rich in objects of this kind. The ones pictured above are from the collection of Jaime Solera.

neither understood nor even completely absorbed by the indigenous inhabitants.

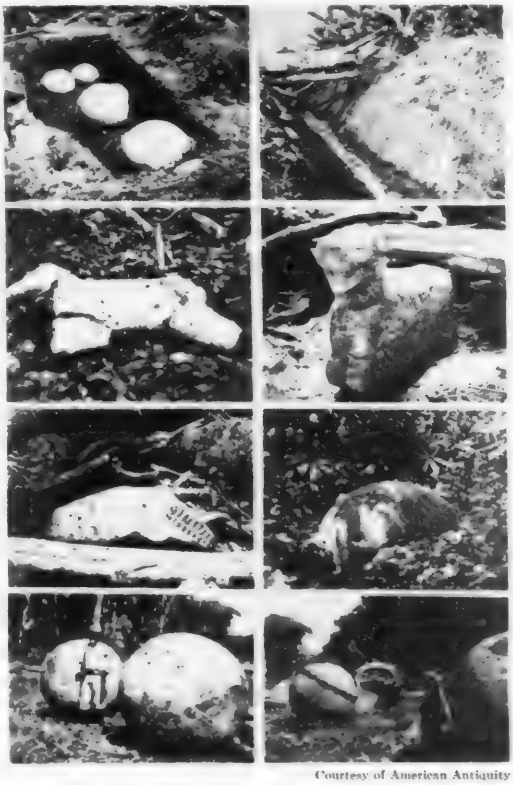
In a sense, it is part of the tragedy of Costa Rica that the early European settlers came late, and came to work their own farms for themselves, much as the Pilgrim Fathers came to New England, not to use slaves or to get rich quick overnight through Indian labor, as happened in the great viceroyalties of Mexico and Peru, and in Guatemala. Elsewhere fabulous gold mines, which in Costa Rica are non-existent, helped to foster this difference. The Spaniard came to Costa Rica to farm his own land, to live, and to work, much as he had worked in the country districts of mother Spain. He brought the cow. He brought the heritage of the painted ox-cart, and he killed the Indians in the highland section, where a temperate climate appealed to the southern European mind. The Indian totally disappeared from the central plateaus. It was hardly a question of absorption, but one of actual extermination such as we find in New England history.

The Indian disappeared from the highland area, and with him his culture and many of his foodstuffs. Curiously enough, it was his medicines and foodstuffs that first attracted decided attention from such outstanding leaders of the Conquest as Juan Vásquez de Coronado, the priest Juan de Estrada Rávago, and Fray Agustín de Zevallos. The pimiento (allspice) tree, whose fruit served to dull headaches and ease pain, much as the modern aspirin; the leaf which was used as salt

when none was available—these and other items disappeared from the knowledge of the early settlers. Most had had no such things in Spain, for the peppers and spices of the East Indies had needed the pocketbook of kings and nobles and were far beyond reach of the tiller of the land.

Away from the central plateau, back in the hot humid area of the coast, and in the little known forests of the south and east, there the Indians remained and there the early settlers barely penetrated. Yet, as late as colonial times a few attempts at colonization were made in the section of Boruca, where precious weavings of purple thread fit for the King or the Pope were current, and in the Talamanca hills, where the location of legendary gold and emerald mines was whispered by father to son. Beyond this, there was little effort to move outside of the central area, and even the very early colonizers, who remained on the Nicoya Peninsula in the southwest, tended to drift slowly northward to the more pleasing climate of the uplands.

In truth, it was more the Church, and a scattering of adventurers who were after gold, that persisted in maintaining the eastern settlements. When, in the 17th and 18th centuries, the courage of the Talamancan tribes rose once more after being blunted by the confusion of a conquest made through the aid of firearms (hitherto unknown to the Indians), and



STONE BALLS AND ANIMAL FIGURES

Stone figures, such as the ones at right, have been found in a number of graves and scattered in the forests, particularly on the Caribbean side of Costa Rica. The discovery of the stone balls in the southeast flood-plain area presents something of a mystery, as no one knows how they got there or what their purpose is. They are perfect spheres of solid rock, ranging from five inches to seven feet in circumference.

Courtesy of American Antiquity

of that terrible animal the horse, the towns and missions of this region were burned, and all non-Indians massacred, neither the Church nor the State cared to reembark on such a perilous and unnecessary move as an attempt at recolonization. There was plenty of land elsewhere in the country with better climate, more plains, and less craggy mountains. The authorities paid heed to the fact that Chirripó, the highest peak in Costa Rica and the second highest in Central America, some 13,000 feet, lay right in the heart of Talamanca. Land was available elsewhere, good land with easy transportation. Gold could still be washed from the rivers descending to the coast, and the few who sought the mines could take the road of the adventurer farther inland. It was not necessary to risk lives and family comfort and happiness.

It was necessary, nonetheless, to retaliate, and in so doing, curiously enough, the State unconsciously copied the system initiated in America by the powerful Incas of Peru at the height of their era and uprooted the most turbulent of the rebellious peoples, the Térrabas, from their ancestral home, transplanting them to land of the Boruca Indians in the southeast. The Spaniards earlier had moved the Quepos and the Cotos to Boruca in forced colonizations. Other peoples also were transplanted to a lesser degree. Some Bribrí and Cabécares were settled in the central eastern portion, at the foot of the Talamanca range, on the southern side, where centuries earlier their ancestors had descended to war against the more peaceful Borucas of the Pacific region.

And so they stay, even today, remote, scattered peoples, once of a long, proud heritage. They stay, even today, on the fringes of the non-Indian population which has not yet felt the economic necessity to leave the high temperate plateau area of Central Costa Rica. Many indigenous groups have totally disappeared. The highland Huetar, for example, was completely destroyed by the first conquerors. The Chorotega-Mangues of the Nicoya Peninsula, whose knowledge of hieroglyphic writing and possession of deer-skin books amazed the Spaniards and point to a northern ancestry, still are found in closed, small communities in the Nicoya hills. They are found without their language, without their weavings which claimed the praise of such a hardened critic as Oviedo, and without any semblance of their ancient greatness.

Along the northern and western boundaries of the country, we find today the Guatuso Indians. They are descendants of the very ancient and now extinct Corobicis with whom the Chorotegas vied for the honor of being the oldest and original inhabitants of the land; and of the now non-existent Votos, who inhabited a region producing the pepper trees that delighted Coronado, and who were governed by a female ruler; and, possibly, of the now extinct Suerres, who kept in cultivation with cacao trees the humid, lush, northwestern area where only the jungle is found today. The Guatusos are poor, miserably so; they are a people who live in sickness, fear, and awe of all foreigners, ever in dread of enslavement.

This is the history of the greater portion of the indigenous population of Costa Rica.

There are certain groups of these Indians, however, who retain beneath the crafty, dull attitude that is always assumed when dealing with non-Indians, a knowledge and utilization of their surroundings which is born from the experiences of the past and the culture of their forebears.

In the southeast and northeast, we have mentioned the Boruca, the Térraba, the Bribrí, and the Cabécar; amongst this last

Courtesy of Doris Stone

CIRCULAR CHIRRIPÓ HUT

This type of dwelling is still in use by the Chirripó Indians, who form one of the more primitive of the Costa Rican tribes.

group we count the more primitive Chirripó whose territory lies still farther to the north and west.

These Indian populations talk their own language, sing their own songs, and recount their own legends. The tribes of the Caribbean side and the Talamancan forests excel in making fiber-string bags, knitted painstakingly with the fingers and dyed with leaves and barks of the woodland. It is this same woodland, also, and the lore of its herbs and barks, that has produced today the nearest to an effective antidote against the bite of the dread bushmaster. It is these tribes which still furnish a priceless model to the student of a pre-Columbian way of life. Bark cloth, medicine men living in circular-shaped houses, tabus, clans, and secondary burials, and unbelievable customs of the past still in use in the present can be found among them.

But the most remarkable, and in a sense, the most useful of all these southern people, is that composite group the Borucas. Culture can take only certain roads. There are only certain ways in which the human mind can unfold. While our modern scientists have been busily hunting methods of aid for textile factories, for example, and through the complicated byroads of research have unfolded a botanical series of colored cottons, the Borucas of southeastern Costa Rica have carefully culti-

vated a brown cotton, as their relatives farther southward in Ecuador and in Peru have cultivated, and in part forgotten, an equally old green and a blue cotton.

There are three places known in the world where the single weft-weave pattern, that variety of weaving that does not permit the design to appear on the reverse side, has been found to any extent. Of these three places, Peru, Ecuador, and Costa Rica, only in the Oriente of Ecuador and among the Borucas of Costa Rica is this complicated art still practiced. The famous purple dye, obtained from a shellfish known scientifically as *Murex purpura*, is still gathered. The Borucas, with a curious sense of conservation that is singularly absent among the majority of men, do not kill the animal, as did the Indians of Tehuantepec in Mexico where formerly the same dye was known. The Borucas first turn the shell upside-down, thereby emptying the water, and then blow into it. This infuriates the creature, which reacts against its enemy by spitting back, a reaction which biologically is supposed to anesthetise its victim. The Indian is prepared, and places his roll of home-spun white cotton thread in front of the opening in the shell. The greenish-yellow fluid lands on the thread in sufficient quantity to penetrate the fibers. After it dries, this fluid turns a fast purple, and the thread can be woven into cloth, while the shellfish lives to expectorate another day.

It is the Borucas who still chew a member of the *Piper* family to stop pain and to forget hunger. During the war, when quinine was scarce, and soldiers unaccustomed to tropical conditions suffered and died from fever, it is an interesting fact that the Borucas, in spite of an occasional attack of malaria after visits to the mosquito-ridden coast, did not need quinine. In many of the yards of the Borucas, the tree *Cedrón plauche*, a decoction of whose fruit is effective in lowering fevers, is common. Even the diet of the Borucas is of universal interest. A principal part of their foodstuff consists of the sporing fronds of ferns, flowers, and the inflorescence of palms. From such sources, many vitamins are obtained and, to be sure, certain ills, such as rheumatism and high blood pressure, are cured.

Courtesy of Doris Stone

BORUCA WOMAN WEAVING

The Borucas still use the single-weft weave, which does not permit the design to appear on the reverse side. Ecuador is the only other country in the world where this complicated art is still practiced.

It is with good justification, therefore, that the present Costa Rican government has turned its attention towards these little known groups of southeastern and northeastern Costa Rica. An educational program based on agriculture and the revival of tribal arts is now in process. It is a program that will take the burden of at least three thousand individuals off the already overloaded economy of the coffee-growing Central Plateau. For the first time, it will combine the white man's practical sciences, such as health and sanitary methods, modern agriculture, and new crops, with the best of the old indigenous culture, and by so doing, will recreate a pride in one of its largest potential working groups. At the same time it may perhaps contribute new knowledge to medical science and the arts.

Rómulo Gallegos

President of Venezuela

RÓMULO GALLEGOS, candidate of the Democratic Action Party of Venezuela, won a sweeping victory in the presidential elections of December 14, 1947. He takes office on February 15, 1948, and his term runs to April 19, 1952.

The December elections were a landmark in Venezula's history, since for the first time in a presidential election all adults of 18 and over were guaranteed direct, universal, secret suffrage. Provision for this was made in the new Constitution and in the electoral law of September 19, 1947,[1] although similar privileges had previously been granted for the purpose of electing a Constituent Assembly in 1946. Out of a total population of approximately 4,000,000, about 1,500,000 men and women voted in the December 1947 elections.

Internationally known as a writer, the new Venezuelan President was born in Caracas on August 2, 1884, the son of Rómulo Gallegos Osío and Rita Freire Guruceaga. He received his education at the Central University of Caracas and began his teaching career in the high schools of Venezuela. From 1912 to 1918, he served as assistant principal of the Caracas High School, and from 1918 to 1920, as assistant principal of the Normal School for Men. In addition to these duties, Gallegos also taught philosophy at the Andrés Bello High School in Caracas between 1912 and 1930, and was made director of this institution in 1922. While he was teaching he was also writing.

Gallegos was opposed to the dictatorship that prevailed in his country under Juan Vicente Gómez from 1908 to December 1935, and in 1931 he showed his disfavor by going into voluntary exile. He spent five years in the United States and Europe, and did not return to Venezuela until 1936, after Gomez' death. At that time, he was appointed Minister of National Education, which office he held for three months, and in 1937 he was elected deputy to the National Congress for the Federal District, where he served as a member of the opposition until 1940. Later, Gallegos became President of the Municipal Council for the Federal District and was nominated as opposition candidate to run against General Isaías Medina in the presidential elections of 1941. The election was by the national legislature, not by popular vote, and Gallegos was defeated.

In 1941, Gallegos founded and presided over the Democratic Action Party, which overthrew the Medina government in

[1] *See* BULLETIN, *January 1947*, p. 52.

1945. Refusing the presidency, he continued his leadership of the party under the government of the Revolutionary Junta headed by Rómulo Betancourt. The party nominated Gallegos as its candidate last summer, after promulgation of the Constitution of July 5, 1947.

The program of the Democratic Action Party is frequently described as middle-of-the-road progressive and liberal. It aims to better the lot of the masses, abolish illiteracy, improve agricultural and sanitary conditions through government action and subsidy, sponsor national industries, do away with military control of civilian affairs, and work for freedom of worship, the press, assembly, and petition. In addition to its victory in the presidential elections, the Democratic Action Party also won substantial majorities in the National Congress and in most of the State legislatures.

Rómulo Gallegos is best known abroad as Venezuela's most distinguished man of letters. He started his literary career in 1909 as editor of a Caracas magazine called *La Alborada*, and later contributed short stories to two other publications. In after years, however, he devoted himself exclusively to the realistic novel, his most famous book being *Doña Bárbara*, which received the award of the Best Book of the Month Association of Madrid in October 1929. This and many additional works have been translated into foreign languages and the originals are used as standard texts in American colleges.

The *New York Times* for December 22, 1947 devoted its entire *Topics of the Times* column to a discussion of *Doña Bárbara*. A portion of its commentary is given below:

"Heroine, hero, admirably etched lesser characters, typical Venezuelan llaneros, magnificent riders, daring swimmers, loyal, tricky, witty, chivalrous, nonchalant givers and takers of violent death—all these throng the pages of *Doña Bárbara*, making it a veritable epic of Venezuela. But the book's real hero and its real heroine, and the real heart of its enthralling narrative, are to be sought not in those peopling the llano evoked by its author, but in the llano itself, as it is revealed with extraordinary vividness by Señor Gallegos—the llano—'lovely and terrible, with plenty of room for beautiful life and atrocious death . . . the llano which frightens, but not with a cold fear that freezes the heart, but with a fear that is warm, like the great winds of its sun-baked immensity. . . .'"

Lowell Dunham makes the following comments:

"As an interpreter of Venezuela, Gallegos is extraordinarily well equipped for his task. He has an intimate knowledge of the geography of his country, of its people, their psychology, customs, and language. He is especially concerned with the problem of improving the lot of the peons and labors to make his compatriots more keenly aware of the ills that beset them. . . . He is a master of dialogue, which is always spontaneous and authentic . . . . His characters are well developed and convincing. This is especially true of the characters in *Doña Bárbara*—one of the greatest pieces of Latin American fiction."[2]

Other novels by Gallegos include: *Reinaldo Solar*, 1920; *La Trepadora*, 1925; *Cantaclaro*, 1933; *Canaima*, 1934; *Pobre Negro*, 1937. Of these books, *Cantaclaro* and *Canaima*, as well as *Doña Bárbara*, have been filmed by Mexican motion picture companies and have enjoyed great popularity both in Latin America and in the United States.

[2] *Critical Introduction and Biography (p. xx), in an edition of Doña Bárbara published by F. S. Crofts & Co., New York, 1945.*

Dr. José Maria Bello

Ambassador, Representative of Brazil on the Governing Board of the Pan American Union

THE post of Representative on the Governing Board, with rank of Ambassador, which Brazil has maintained since the Inter-American Conference on Problems of War and Peace at Mexico City in 1945, was assumed by Dr. José Maria Bello in October 1947. Dr. Bello succeeded Dr. João Carlos Muniz at the Pan American Union.

The new Representative was born in 1886 on a Pernambuco sugar plantation which had been his family's home for more than a hundred years. After secondary education at Recife, he entered the School of Juridical and Social Sciences at Rio de Janeiro, and in 1911 was awarded his doctorate in law. At the same time, following a life-long inclination toward journalism, he was writing for various Rio newspapers; later he became an editor. Dr. Bello entered the field of education as professor of the history of civilization at the University of the Federal District, and shortly after receiving this post was appointed by the Government to a professorship in introductory law at the University of Brazil. He has contributed to Brazil's leading publications, and is a well-known author and critic.

In 1919, Dr. Bello was attaché to the Brazilian delegation at the Versailles peace conference. He spent some time traveling through Europe for study and observation, and represented his country at three International Parliamentary Conferences on Commerce—at Rome in 1925, Rio de Janeiro in 1927, and Berlin in 1929.

Photo by Chase-Statler

Over the years, Dr. Bello's intellectual career was tempered by an active interest in politics. He served as deputy, then senator, to the Federal Congress from his native state. Although elected Governor of Pernambuco, he never took office, owing to the Revolution of 1930. He has served as attorney to the Ministry of Finance, and as Attorney General of the Prefecture of Rio de Janeiro.

With the close of hostilities in 1945, Dr. Bello returned to Europe to compare post-war conditions with those he remembered from the years following the first

World War. He lived in Portugal for a time, and was in France when he received his appointment to the Pan American Union.

Among Dr. Bello's works are *Estudos Críticos*, *Novos Estudos Críticos*, *Ensaios Políticos e Literários*, *À Margem dos Livros*, and *Inteligência do Brasil*, in the field of criticism; a novel entitled *Os Exilados; Panorama do Brasil*, a sociological study of Brazilian life; *Filosofia do Direito; Democracia e Anti-Democracia;* and a *Retrato de Eça de Queiroz*, written in 1945 on the centenary of this Portuguese writer and thinker. He is at work on a *História da República*, of which the first volume has already been published. It covers the history of Brazil to the end of the 19th century, through the administration of Campos Salles; the second will bring it down to 1930.

Indépendance d'Haïti

Janvier 1804 — Janvier 1948

ANTOINE BERVIN
Chef de la Section Française, Union Panaméricaine

Le Calendrier Interaméricain dressé cette année à l'usage des maitres et élèves des Trois Amériques rappelle à la première ligne de sa première page que la deuxième nation indépendante du continent, après les Etats-Unis d'Amérique, est la République d'Haïti. Etats-Unis: 4 Juillet 1776, Haïti: 1er Janvier 1804! Voilà les deux pays, qui d'une main blanche et d'une main noire ouvrent les deux Portails de l'Histoire du XVIIIième et du XVIXième siècles dans l'Hémisphère Occidental. L'Education certes, est un domaine qui a sa déontologie et ses hautes traditions. Il est certain dés lors que les instituteurs américains sauront dégager pour l'enseignement de leurs élèves non seulement la grandeur de ces évènements en eux-mêmes qui ont décidé du destin d'une large portion de l'humanité, mais encore leur répercussion et leurs conséquences dans le temps et dans l'espace. Sans doute, ils feront sentir à leurs jeunes auditeurs curieux de savoir les lois de la nature et avides de connaitre les origines de l'homme autant que les raisons de sa destinée dans ce monde, comment—pour Haïti surtout—des conglomérats humains doués de sensibilité comme le commun des êtres vivants, meurtris et avilis sous la pression ignoble des moeurs et des lois scélérates de l'époque se sont révoltés et ont tout bouleversé par la combinaison des forces morales et spirituelles triomphantes. De là des transformations politiques profondes, des modifications géographiques considérables et la disparition à jamais des "commandeurs" qui avaient amenés dans le continent la désolation et la mort.

Le dernier coup de canon tiré à Vertières, dans la Commune du Cap-Haïtien, le 18 Novembre 1803, annonçait une ère nouvelle dans l'île et dans l'Hémisphère, un drapeau nouveau s'élevait à l'horizon et Haïti entrait dans la communauté des Nations. Naturellement, certains maîtres d'écoles raconteront cette épopée à leur façon, et probablement en quelques minutes. D'aucuns diront ce qu'ils voudront selon leurs connaissances personnelles et surtout selon leur degré d'impartialité. Ceux qui l'auront appris sous l'angle de leurs préjugés en feront une histoire comme toutes les autres, mais ceux qui l'auront lu avec leur intelligence et leur coeur, comme un Wendell Phillips, par exemple, et avec une dose normale d'équité y verront une épopée formidable digne de la grandeur des Thermopyles.

Cette aventure fut tellement grandiose et extraordinaire que les poètes haïtiens mirent cent ans pour la chanter sur des thèmes différents. Les échos traversèrent les mers, les circonstances en furent traduites dans toutes les langues et les héros principaux honorés dans la plupart des galeries interaméricaines. L'Histoire du monde a donc retenu ce chapitre. Mais le courage du peuple haïtien ne se limite pas seulement, comme on pourrait le croire, à l'action militaire. Dans l'ordre civil, par les mille obstacles qu'il doit surmonter chaque jour, il prouve un héro-

isme égal à celui démontré sur les champs de bataille. La trajectoire qui part de 1803 pour aboutir à nos jours couvre une longue série de péripéties politiques, économiques et sociales, les unes aussi dignes d'observations passionnantes que les autres pour les historiens, les sociologues et les hommes d'Etat. En effet, voilà un petit pays qui partit de zéro dans tous les domaines, avec un matériel humain dépourvu de toute formation, sans économie, sans finances, sans écoles, et ce qu'il y a de plus triste, sans amis nulle part, ayant en face de soi une double insularité géographique et linguistique, partant sans communication avec le monde extérieur. Il ne lui restait en partage qu'une seule ressource d'ordre essentiellement psychologique: un arsenal d'orgueil! Oui, et rien que cela, rien que ce facteur moral. Telles furent les conditions du départ. Aucune nation au monde ne débuta dans des conditions plus pénibles. Née dans la douleur, elle grandit dans les larmes et la souffrance. Rien que pour cela, ne devrait-elle pas sentir davantage, dans ce siècle de christianisme triomphant, la sympathie de son entourage? Hélas, c'est tout le contraire qu'on observa. De partout ce fut une accumulation d'intrigues épouvantables. Des embûches sur sa voie sont semées comme à plaisir. Des différends diplomatiques surgissent, s'aggravent et sont suivis des réclamations les plus odieuses, en dépit des décisions contraires de justice. Chaque jour donnait naissance à un tourment nouveau. Mais les peuples dont l'âme nationale est trempée à la source même des plus dures épreuves deviennent pour ainsi dire immunisés contre les revers nouveaux. Ils peuvent être abattus pour un temps par les circonstances, sans qu'ils soient vaincus pour cela. Et l'orgueil s'alliant plus tard à une ferme détermination ils parviennent à modifier leur destin.

Ainsi donc, de 1804 à nos jours, la République d'Haïti entreprend la réhabilitation de son matériel humain, elle l'élève progressivement à la lumière et à la dignité humaine par l'éducation. Telle était d'ailleurs la haute pensée du roi Henri Christophe lorsqu'il créa des académies, des théâtres, une imprimerie et qu'il bâtit tout d'une pièce un ordre nobiliaire avec des ducs, des marquis et des barons dans le but d'inculquer à son entourage les notions suprêmes de la culture, des formes et des bienséances. Avec 104 Communes, Haïti érige un système politique et administratif qui assure l'équilibre de la structure gouvernementale échaffaudée elle-même sur les trois grands pouvoirs de l'Etat: l'Exécutif, le Législatif et le Judiciaire. Une Administration Fiscale chargée de percevoir les taxes légales et d'effectuer les dépenses budgétaires ou celles ordonnées par les Chambres législatives fonctionne à travers tout le pays. Une Chambre des Comptes contrôle elle-même la comptabilité publique. L'économie haïtienne, inexistante au début, bien que basée sur l'agriculture avec les aléas inhérents aux entreprises agricoles, assure quand même des revenus suffisants permettant à l'Etat de faire face aux obligations annuelles de treize Départements ministériels, plus l'entretien de l'Armée et les amortissements réguliers des emprunts extérieurs.[1] Sa balance commerciale se chiffre pour le dernier exercice fiscal 1945–46 à $38.744.909. Son réseau économique se développe normalement avec 25 pays du monde, dont 15 du continent américain et la chaine des îles antiléennes par l'exportation de ses produits: café, figues-bananes, sisal, coton, sucre, cacao, huiles essentielles, bois d'aca-

[1] *Une forte partie de nos obligations financières a été réglée en Juillet 1947, par le versement de $6.000.000 à la Banque de New-York pour le rachat des Bonds séries A et C de l'Emprunt 1922 et 1923.*

JEAN-JACQUES DESSALINES

Fondateur de l'Indépendance Haïtienne, couronné Empereur sous le nom de Jacques 1er, mourut à l'âge de 48 ans en 1806. Ses restes reposent ensemble avec ceux d'Alexandre Pétion au Mausolée National de Port-au-Prince.

jou, coprah, peaux d'animaux, une variété notable d'articles fabriqués à la main, en bois et en sisal, connus sous le nom de "petite industrie," comprenant des souliers, des pantoufles, des sacs à main, etc.

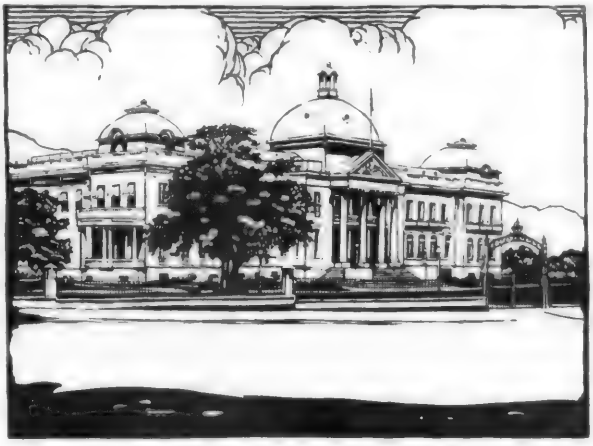
Dans l'ordre extérieur elle entretient des relations diplomatiques et consulaires actives et passives par l'organe de 4 Ambassades, 16 Légations et 36 Consulats dans 20 pays d'Amérique et d'Europe. Elle appartient à la plupart des organisations internationales.

Au point de vue culturel, les différentes générations qui se sont suivies de l'Indépendance à cette date ont accumulé une bibliographie étonnante quand on considère le pourcentage infime de ceux qui ont participé d'une manière active à la vie intellectuelle du pays. Bien que la *Bibliographie Générale et Méthodique d'Haïti* préparée par Ulrick Duvivier (Imprimerie de l'Etat, Port-au-Prince, Haïti) ne soit pas complète, on peut dire sans crainte de se tromper qu'il y a environ 10.000 ouvrages haitiens écrits dans tous les genres. En voici quelques têtes de chapitres qui serviront à l'édification de tous. *Sciences:* sciences médicales, physiques et naturelles, sciences maritimes et juridiques, législation, codes, doctrines, jurisprudence, sciences économiques et financières. *Littérature:* Poésie, essais, romans, nouvelles, contes, théâtres, histoire. *Pédagogie:* ouvrages scolaires. *Documents publics,* diplomatiques et parlementaires. Quant aux organes de presse, la Bibliographie Générale de Duvivier, quoique incomplète encore sur ce point et ne s'arrêtant qu'à 1941, signale qu'il a été publié en Haiti, de 1807, année de la parution du premier journal haïtien *La Sentinelle,* à nos jours, plus de 800 journaux et revues de tous genres et de toutes tendances. Les arts libéraux se sont développés sur une échelle plus modeste, mais déjà le répertoire national retient avec beaucoup de fierté les compositions musicales de Justin Elie, Occide Jeanty, Ludovic Lamothe, Luc Jean-Baptiste, Franck Lassègue, Werner Jaegerhuber, qui ont crée des oeuvres riches, délicates, tirées pour la plupart de l'histoire et du folklore indigènes. Ces jours-ci la peinture haitienne est accueillie avec la plus vive sympathie dans les Salons d'Exposition de New York, de Paris et de Washington. Le reste est à l'avenant. Voilà en termes brefs quelques indications qu'il convenait de rappeler à l'occasion du 144ème anniversaire de l'Indépendance de mon pays, qui serviront, je l'espère, à édifier les jeunes amis du continent autant que le souvenir émotionnel de l'épopée émancipatrice de 1803.

Evidemment, les Haïtiens n'ont pas la

prétention de croire qu'ils ont réalisé l'œuvre de civilisation qu'ils se doivent à eux-mêmes d'édifier, ne serait-ce que pour justifier le "coup de tonnerre" qu'ils ont fait éclater dans le continent, mais ils aimeraient voir les uns et les autres prendre en considération les conditions épouvantables dans lesquelles Haïti prit naissance, les difficultés innombrables qu'elle a rencontrées dans son existence nationale et qu'en définitive les gens bien pensant apprécient ses efforts de chaque jour pour affirmer sa personnalité. Naturellement le concept "civilisation" est sujet à de multiples interprétations et il ne peut être compris qu'à la lumière des origines, de la formation des peuples et de leur orientation particulière dans la vie. Notre Haïti elle-même, telle qu'elle se situe actuellement, se trouve à une étape décisive de son destin. L'histoire dira si elle entend s'attacher irrémédiablement à la civilisation culturelle française qu'elle s'est acquise et dont elle est si fière, à la civilisation technique américaine dont elle reçoit involontairement les influences ou si elle aura assez de vigueur morale pour en créer une à soi ou d'établir enfin une combinaison sortable des deux premières, comme d'ailleurs le recommanderait la sagesse et l'intelligence du siècle.

Mais qu'importe la voie qu'elle aura choisie, Haïti restera quand même un petit pays intéressant à plus d'un titre, à cause précisément des particularités de son histoire, de ses coutumes pittoresques, de sa culture afro-latine si riche de promesses, des races différentes qui s'y rencontrent et se mélangent, de sa société si élégante, de son folklore si abondant. Et lorsque par l'influence du temps les forces du monde seront plus équilibrées à la faveur des conquêtes spirituelles successives, que les hommes verront les choses avec plus de sérénité et plus de bienveillance et que la valeur des peuples se mesurera à l'échelle de ce qu'ils "sont" qu'à celle de ce qu'ils "ont" je souris déjà d'une satisfaction infinie à la pensée qu'à l'appel des peuples mon pays ne sera pas le dernier.



The Voting Procedure in Inter-American Conferences

CHARLES G. FENWICK
Chief, Department of International Law and Organization, Pan American Union

THE voting procedure in inter-American conferences and consultative meetings of Foreign Ministers has, until the signature of the recent Rio de Janeiro treaty, always been marked by the greatest freedom. From the first conference held at Washington in 1889–90 down to the Conference on Problems of War and Peace held at Mexico City in 1945, the voting procedure adhered closely to two fundamental principles: no State was bound by a resolution or declaration from which it dissented; and on the other hand a majority of States were always free to adopt on their own account whatever resolutions or declarations they might believe would further their own particular interests.

The Regulations of the Conference of 1945 followed the traditional practice. A quorum was to consist in a majority of the nations participating in the Conference. Both in plenary sessions and in committee meetings the delegations of the various States represented were to have but one vote, in accordance with the principle of equality of status. Votes upon reports or projects presented to the Conference were only to be taken when two-thirds of the States attending the Conference were represented. Except in cases expressly indicated in the regulations, reports and projects under consideration by the Conference were to be "considered approved" when they obtained the affirmative vote of an absolute majority of the delegations.

What meaning is to be attached to the word "approved" as it appears after each of the resolutions listed in the Final Act of a conference? Clearly not that the resolution is to be considered binding upon States which voted against it and which carried their opposition to it so far as to enter a dissenting vote in the Final Act of the conference. This happens but rarely; but when it does happen there is no question whatever of a State being bound against its will. The principle of the equality of States has always been understood to protect any one of them against decisions to which it has not given its individual assent. In this respect the inter-American rule is the same as the international rule: in the adoption of new obligations each State is free to accept or to reject a proposed rule. But the refusal of the individual State to go along with others does not restrict the corresponding freedom of the others to act upon their own account.

Dissents formally entered in the Final Act of a Conference thus appear to play much the same part as the refusal of a particular State to sign a multipartite treaty or the announcement of reservations with respect to certain of its provisions. Inter-American resolutions which are no more than broad statements of desirable objectives are as a rule approved without dissent. In like manner, declarations of fundamental principles of law, not committing the States to specific acts, are in general unanimously adopted. When,

however, a resolution calls for concrete measures or seeks to commit the members of the conference to a particular policy involving the possibility of serious consequences, every effort is made to secure the unanimous agreement of all of the members. Such was the case with the Declaration of Lima of 1938, and with the resolution of Rio de Janeiro of 1942 calling for the breaking of relations with the Axis Powers. In both cases it was imperative to demonstrate the solidarity of the American Republics in the presence of a common danger. If the formula finally adopted was weaker than many States would have chosen, it had double the force of an agreement in which one or more of the leading States might have failed to join.

The need of an exception to the traditional rule became evident during the negotiations looking to the conclusion of a definitive treaty along the lines contemplated in the Act of Chapultepec. Continental security was the objective, not as a temporary measure to meet the emergency of the war, but as a permanent policy of inter-American regional defense under the terms of the Charter of the United Nations. But if a system of regional defense was to be set up at all, it must give assurance of its practical effectiveness. It would not do to proclaim principles of regional security and then fail to support them when the emergency arose. There was, of course, no question of allowing any State to exercise a veto power. The rule of unanimity in inter-American relations had never meant that. The question was rather whether, if a unanimous agreement to act could not be obtained, it would be feasible for a majority to act on their own account. Could a system of regional defense be relied upon if one or more of the leading States should decide when the time came that they would not participate in it?

Some concession to established traditions was called for; but it was imperative that the concession should not weaken the authority of the decisions taken by the majority. In the replies of the American Governments to the consultation formulated by the Governing Board of the Pan American Union there was practical unanimity in favor of reaching agreement upon collective measures of defense by two-thirds of the parties, only one State being in favor of unanimity and one in favor of a simple or absolute majority. In response to the question whether the collective measures agreed upon in consultation should be obligatory for all of the contracting parties or only for those which had voted to put them into effect, a substantial majority favored making them obligatory upon all. But the importance of the minority opinion led to an adjustment in accordance with which the decision of a two-thirds majority should bind the whole body in respect to the determination of the fact of aggression and in respect to the measures to be taken to repel aggression, except that no State should be required to use armed force without its consent. Articles 17 and 20 of the Treaty of Rio de Janeiro incorporate this decision.

The voting procedure in the consultative meetings that may be called under the terms of the Treaty of Rio de Janeiro thus differs markedly from the procedure under the Charter of the United Nations. Decisions are taken not by an exclusive Security Council, but by the consultative organ of the whole regional group. No right of veto exists by which a single State can block a decision fixing the party guilty of aggression. All are bound to cooperate in the sanctions agreed upon if these are limited to measures short of the use of armed force. Certain of these sanctions short of armed force could not be applied effectively by a two-thirds majority only. Unanimity in the breaking of economic

relations, for example, was a practical necessity. But in respect to the use of armed force, should the situation call for that extreme measure, unanimity, although desirable, was not indispensable. One or more States could hold back, but the others would be free to go ahead on their own account.

Inter-American procedure under the treaty of Rio de Janeiro is thus marked at once by its simplicity and its practical effectiveness. It calls for the acceptance by all of the American States of the decision of a two-thirds majority in matters in which unanimity is essential; and while respecting the reluctance of States to pledge themselves to the use of armed force against their individual judgment of the necessities of the case, it denies to any State the right to obstruct the action of other States which believe that the circumstances call for such measures.

The Assembly of Librarians of the Americas

MARIETTA DANIELS
The Library of Congress, Washington

THE Assembly of Librarians of the Americas, held in Washington from May 12 to June 6, 1947, was the culmination of the dreams and schemes of librarians throughout the Western Hemisphere for many years. The conference, organized by the Library of Congress with the assistance of the Department of State, under the latter's cultural relations program, received the full cooperation of the Pan American Union, the governments of the other American republics, and the American Library Association. Librarians from Puerto Rico, the Philippines, and Canada were sent by their organizations to join the delegates from the other American republics. These were:

Argentina:	Ernesto G. Gietz Augusto Raúl Cortazar Carlos Víctor Penna
Bolivia:	Nivardo Paz Adrián Camacho Porcel
Brazil:	Rubens Borba de Moraes Nair Miranda Pirajá Maria Luisa Monteiro Bernadette Sinay Neves Guiomar de Carvalho Franco Noemia Lentino Adalgisa Moniz de Aragão
Chile:	Héctor Fuenzalida
Colombia:	Cecilia Jiménez Rubén Pérez Ortiz
Costa Rica:	Julián Marchena
Cuba:	Fermín Peraza Jorge Aguayo
Dominican Republic:	Emilio Rodríguez Demorizi
Ecuador:	Alfredo Chaves
El Salvador:	Baudilio Torres

Guatemala:	Ricardo Castañeda Paganini J. Joaquín Pardo
Haiti:	Raymond Lavelanet
Mexico:	Clemente López Trujillo Rafael García Granados
Nicaragua:	Luis Cuadra Cea
Panama:	Galileo Patiño
Paraguay:	Abdón Álvarez
Peru:	Jorge Basadre
Venezuela:	Enrique Planchart
Canada:	J. A. Brunet Margaret S. Gill William K. Lamb
Philippines:	Gabriel A. Bernardo

Many librarians from the United States represented committees of the American Library Association and other professional organizations.

Preliminary preparations for the Assembly and the general administration of the conference itself were made under the direction of Luther H. Evans, Librarian of Congress, by a secretariat consisting of Lewis Hanke, Francisco Aguilera, and Marietta Daniels of the Hispanic Foundation of the Library of Congress, and Ernesto G. Gietz of Argentina who, as temporary Consultant to the Library of Congress, served as secretary of the Interim Agenda Committee. At the first plenary session, Dr. Evans was elected chairman of the Assembly.

The conference was formally opened on May 12 by Dr. Evans, "to foster library development in the Americas and to stimulate library relations among the countries of the Americas, within the framework of world library development, and in the interest of world-wide Hispanic studies." The program, planned with the assistance of and suggestions from librarians throughout the Americas, was designed to cover the basic problems facing Latin American librarians and the many aspects of international library cooperation. In order to draw up a blueprint for carrying out the objectives determined by the Assembly, three types of meetings were held in accordance with the nature of the topic to be considered: general sessions, seminars, and committee meetings.

General sessions, presided over by a Latin American moderator and a United States assistant moderator, with a panel to lead the discussion, provided an opportunity for all delegates to discuss freely the role of the library in modern society, the resources necessary to make the library an influential social institution, the technical developments in library organization and development, and the broader aspects of modern library service, such as education for librarianship, extension of library service into rural and industrial areas, inter-library cooperation, and international library relations.

During their deliberations the Latin American librarians agreed that the two fundamental difficulties they face in making their libraries live social institutions are lack of properly trained professional personnel and lack of public and governmental support in terms of awareness of the advantages of adequate library service and the financial means of maintaining it.

Securing a well-rounded collection of book and non-book materials will depend on adequate financial support, a lessening of the customs, monetary, and copyright difficulties in the acquisition of foreign materials, the accessibility of official publications and periodical subscriptions, better exchange relations, the preparation of good trade and subject bibliographies, and a knowledge of the book resources in libraries or in the publishing field of the Western Hemisphere.

For the maximum efficiency of the library in serving the reader, according to the discussions of the delegates in general

sessions, a considerable amount of work still remains to be done in Latin American libraries in the technical organization of the libraries and in the preparation of necessary tools in the languages of the Americas for both the preparation for and the practice of librarianship. The establishment of library schools and the improvement of existing ones was deemed necessary by the Latin American delegates. The Assembly, which began its deliberations with a preoccupation for the specific problems of Latin American libraries, closed its sessions on a note of optimism regarding international library relations, after receiving reports on the bibliographic and library programs of the American Library Association, the Department of State, the Pan American Union, and UNESCO.

Seminars

Seminars were held to permit more time for consultation and discussion on topics requiring expert or technical advice and knowledge. For the seminar on library architecture, an exhibit of trends in library architecture was prepared. Leading architects and librarians who had been intimately concerned with library architecture were present for consultation. Other seminars were held on the topics of children's literature, union catalogues, photographic reproduction, bookbinding, and children's literature. Noted authorities in the field attended, bringing with them special exhibits and practical suggestions.

Committee activities

Through the general sessions and seminars the attending delegates exchanged opinions and knowledge and broadened their professional acquaintance. The most important work of the Assembly, however, was accomplished by the committees. These committees and their co-chairmen were as follows:

I. Education for Librarianship: Carlos Víctor Penna (Argentina) and Arthur E. Gropp (United States).
II. Technical Processes: Jorge Aguayo (Cuba) and Amelia Krieg (United States).
III. Acquisitions: Héctor Fuenzalida (Chile) and Phillips Temple (United States).
IV. Bibliography: Augusto Raúl Cortazar (Argentina) and Miron Burgin (United States).
V. Library Services and Development: Galileo Patiño (Panama) and Helen T. Steinbarger (United States).
VI. Executive Committee: Rubens Borba de Moraes (Brazil) and Jorge Basadre (Peru).
VII. Inter-American Library Relations: Rubens Borba de Moraes (Brazil) and Janeiro Brooks (United States).
VIII. Findings Committee: Francisco Aguilera (United States).

The committee findings or recommendations were presented to the Assembly at large and adopted in 57 resolutions at its closing sessions. These accomplishments may be summarized as follows:

The Committee on Education for Librarianship established standards for the professional preparation of librarians in Latin America and laid the groundwork for the formation of a Latin American Association of Library Schools and Library Science Professors.

The Committee on Technical Processes arrived at several recommendations aimed at standardizing cataloguing and classification practices in American libraries and established committees and subcommittees to work on the problems that still remained unsolved.

The Acquisitions Committee endeavored to resolve various problems relating to the acquisition of books, maps, government publications, and periodical publications, and made a number of recommendations to official government and international agencies to secure their cooperation.

Courtesy of the Library of Congress

EXECUTIVE COMMITTEE FOR THE SECOND ASSEMBLY OF LIBRARIANS OF THE AMERICAS

This Committee, elected by the First Assembly, is composed of Luther H. Evans, of the United States; Jorge Basadre, of Peru, chairman; Rubens Borba de Moraes, of Brazil; Ernesto G. Gietz, of Argentina; and Fermín Peraza of Cuba.

The Committee on Bibliography encouraged the compilation of national trade and special bibliographies and set up a committee to compile bibliographies of library literature. It agreed upon certain standards for bibliographic entry which it considered advisable for adoption in bibliographical compilation.

The Committee on Library Services and Development, concerned with the ways and means of extending libraries and library services, recommended various activities to stimulate interest in and support for libraries.

The Committee on Inter-American Library Relations advocated autonomy for national libraries and the preparation of an exchange manual for acquisition purposes.

In order to give some continuity to the work begun during the Assembly and to be undertaken by the committees established by the resolutions of the Assembly, it was considered advisable to consider the delegates members of a Preparatory Commission for the Second Assembly of Librarians of the Americas to be held possibly in 1949, and to select an Executive Committee which would supervise the work of the long-range projects proposed and carry forward the planning for the Second Assembly. The following delegates were elected to the Executive Committee:

Rubens Borba de Moraes (Brazil)
Ernesto G. Gietz (Argentina)
Fermín Peraza (Cuba)
Luther H. Evans (United States)
Jorge Basadre (Peru), Chairman.

Other activities of the Assembly

The extra-curricular activities of the delegates to the Assembly were many and

Courtesy of the Library of Congress

DELEGATES TO THE FIRST ASSEMBLY OF LIBRARIANS OF THE AMERICAS

The Latin American delegates to the Assembly appear on the steps of the Library of Congress with some of their United States colleagues.

varied. On the social calendar were the opening of the Pan American Union Book Exhibit on May 11, the buffet supper offered by the Pan American Union in the Aztec Garden, a dinner and literary evening at the Library of Congress honored by such celebrities as Juan Ramón Jiménez and Karl Shapiro (Gabriela Mistral sent a paper), a concert of the Budapest String Quartet and accompanying artists, a garden party at the home of Miss Janeiro Brooks, Librarian of the Pan American Union, a Department of State reception, and other such events.

One day was spent visiting the Enoch Pratt Free Library in Baltimore. A long week-end was passed in New York inspecting the New York Public Library and the Columbia University Library, and becoming acquainted with the officials of the Carnegie Endowment for International Peace, the Mergenthaler Linotype Company, the *Library Journal*, *Publishers' Weekly*, and the H. W. Wilson Company.

After the Assembly adjourned in Washington the delegates toured the United States four weeks for the purpose of inspecting libraries and other educational institutions and discussing their common problems with librarians throughout the country. The itinerary included New England, the Middle West, the Southwest, and California.

The final phase of the Assembly began on June 29 when the delegates gathered in San Francisco for the annual meeting of the American Library Association. There they took an active part in the procedures of the conference.

The blueprint for tomorrow

The Assembly of Librarians of the Americas officially came to a close in San

Francisco on July 5, 1947. The foundation for a continuance of the work begun was laid before the Assembly adjourned in Washington on June 6. Plans for a second assembly are to be in the hands of the Executive Committee of the Preparatory Commission as mentioned above. In addition to that committee, the following permanent committees or subcommittees were created:

1. Latin American Association of Library Schools and Library Science Professors: Carlos Víctor Penna (Argentina), Secretary General.
2. Latin American Committee on Cataloguing: Gonzalo Velázquez (Puerto Rico), María Teresa Chávez (Mexico), Maria Luisa Monteiro (Brazil), Cecilia Jiménez (Colombia), Carlos Víctor Penna (Argentina), Chairman.
3. Joint Committee on Cataloguing Rules, with representatives of the Latin American Committee on Cataloguing, the American Library Association, and the Canadian Library Association.
4. Inter-American Committee on Classification: Héctor Fuenzalida (Chile), Chairman.
5. Subcommittee on Classification for Roman Law: Jorge Basadre (Peru), Chairman.
6. Latin American Committee on Library Science Bibliography: Augusto Raúl Cortazar (Argentina), Secretary General.
7. Inter-American Acquisitions Committee: Mrs. Edith C. Wise (United States), Chairman.
8. Subcommittee to Compile a Selected List of Dealers in the Inter-American Book, Periodical, and Map Trade: Mrs. Edith C. Wise (United States), Chairman.

These committees began to function immediately upon their establishment and their activity has continued to increase during the months following the adjournment of the Assembly.

The spirit of cooperation manifested by the institutions that supported the Assembly, as evidenced in the activities of the delegates during the sessions of the Assembly, and as apparent in the work that has been done by the delegates since July, points conclusively to a new era of achievements in library fields and improvements in library science in the Americas.

The Earthquake Problem in the Western Hemisphere

EDWARD P. HOLLIS
Seismological Representative, U. S. Coast and Geodetic Survey, American Republics Program

Part I

Introduction

EARTHQUAKES have often plagued the inhabitants of certain regions of the globe, technically called seismic zones or belts. Most of the countries of North, Central, and South America lie partly or, in some cases, almost entirely within such zones. The problem of mitigating the damaging effects of earthquakes is therefore one of great significance for the American Republics.

In former times, those living in the active seismic belts had largely despaired of successfully coping with Nature and accordingly had resorted to the hope that nothing very serious would happen in their particular communities. All too frequently, however, disasters occurred with frightful loss of life. True, some buildings were then strengthened on an empirical basis, but, by and large, reconstruction followed very much the old pattern. This procedure, observable in many instances even today, undoubtedly was due partly to the economic factor involved in strengthening buildings and probably even more to lack of knowledge as to what precautions should be taken.

In the following discussion, an attempt is made, first, to show that, since the earthquake problem is common to most of the American Republics, much better results can be attained by attacking it on a cooperative basis; second, to outline what has been done thus far to contend with the difficulty; and third, to suggest avenues of further research.

Distribution of destructive earthquakes in the Western Hemisphere

A tabulation of the important earthquakes which have occurred in the Western Hemisphere during the last century and a half, together with brief descriptions, is given at the end of this article. The maps (figures 1 and 2) show the general localities in which these shocks were centered. It is apparent that there are very few countries in the Western Hemisphere that do not suffer from destructive earthquakes.

It will be noted from the maps that the shocks are concentrated in certain areas; these are the regions previously referred to as seismic zones or belts. Furthermore, most of the active volcanoes of the Western Hemisphere are situated in these same general regions. Inasmuch as there appears to be a widespread misunderstanding concerning the relation of earthquakes to volcanic activity, a brief explanation is given here.

Earthquakes may be divided into two main classes—*volcanic* and *tectonic*. Shocks of the first type are produced in the immediate vicinity of an active volcano by fluctuations in gas pressure in the throat of the volcano and by hammer effects when a moving mass of magma finds itself suddenly stopped by solid material through

which it is unable to force a path. Such shocks indicate a critical situation within the cone and are likely to be accompanied or followed by actual ejection of lava. However, earthquakes produced in this way are of relatively low energy and are felt over only a very limited area adjacent to the volcano. Occasionally, damage may occur, but never at a distance of more than a few miles.

The second type of shock, the *tectonic* earthquake, is associated with deformation of the earth's crust. In the most active seismic zones, such crustal disturbances have occurred on a large enough scale for a sufficient length of time to produce mountain ranges, plateaus, and ocean deeps. These processes take place partly by folding of the crust and partly by actual fracturing when the deforming forces have produced a stress greater than the breaking strength of the rocks. Such fracture surfaces are termed *faults*. The potential energy set free when fracturing takes place is propagated through and along the surface of the earth in the form of elastic vibrations (earthquake waves).

The frequent, though by no means universal, occurrence of active or dormant volcanoes within zones of geologically recent mountains indicates that a deep-seated relation exists between volcanic action and crustal deformation. Accordingly, it is undoubtedly reasonable to consider tectonic earthquakes and volcanic action as two different manifestations of crustal disturbance. On the other hand, volcanic shocks are purely local phenomena, resulting from abnormal physical and chemical conditions within a specific volcano.

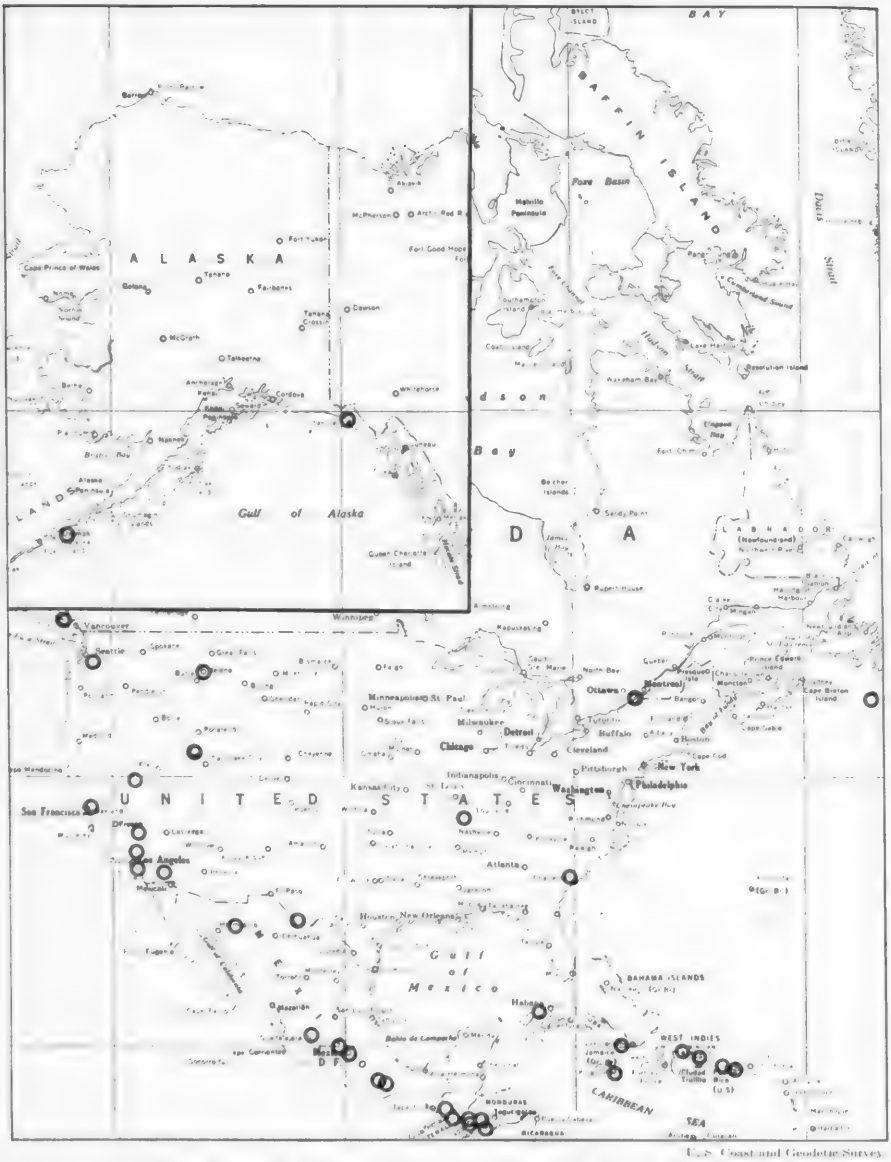
It should be emphasized that even outside the particularly active seismic zones important crustal readjustments occur from time to time, resulting in severe earthquakes in such localities as the middle and eastern United States and eastern Canada.

Direct and indirect effects of major earthquakes

A brief inspection of the tabulation at the end of this paper will give some idea of the appalling damage and loss of life caused by earthquakes. In most cases the destruction has been a direct result of extremely intense ground motions. For example, figure 3 shows a portion of the Helena, Montana, High School after the shock of 18 October 1935. Very serious structural damage had occurred, but the school authorities were making plans to rehabilitate the building. However, on 31 October a second strong shock took place, causing the complete ruin of this wing, as shown in figure 4.

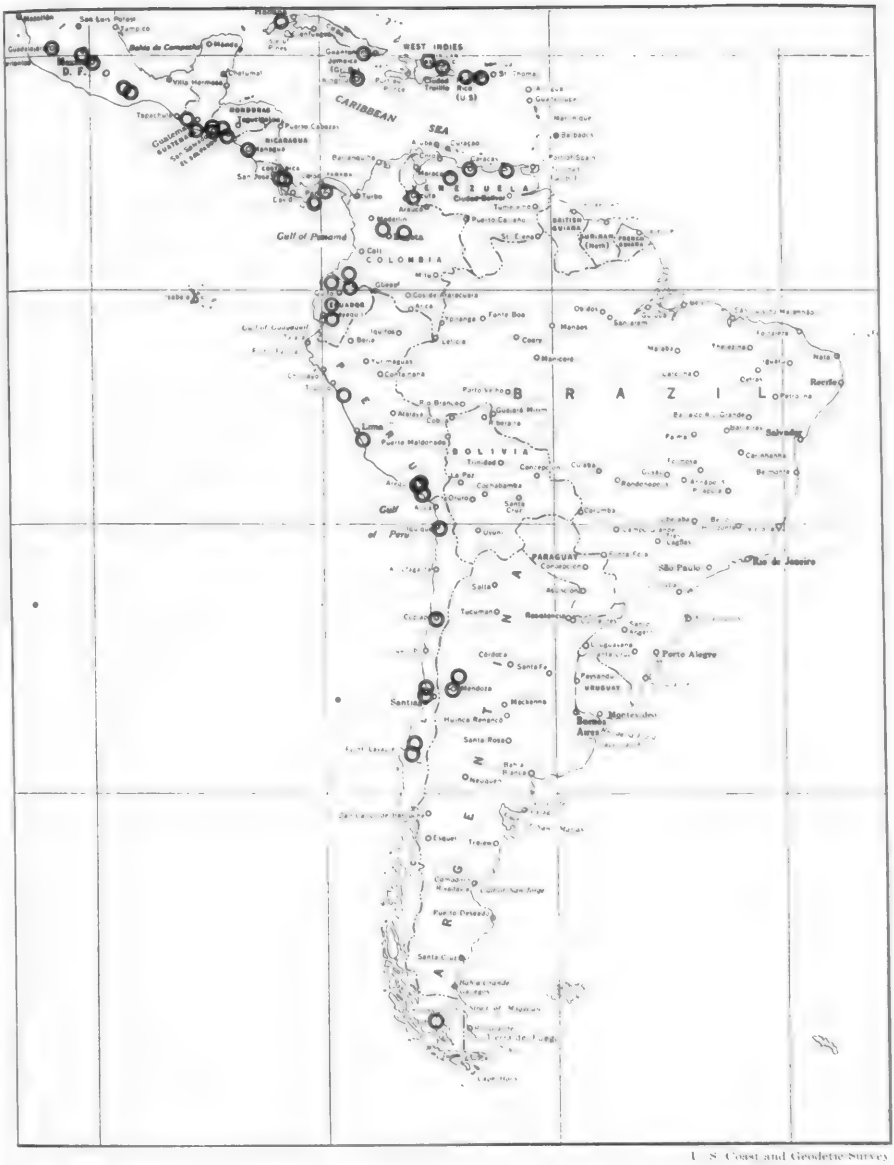
Even in cases where a building is not completely wrecked by strong earthquake motion, the falling of improperly anchored ornaments and parapets may result in serious loss of life if the shock occurs at a time when many people are on the streets. It is evident that adequate attention to these details of construction is almost as essential as structural integrity of the building as a whole.

In some earthquakes further losses have been caused by accompanying seismic sea waves, large scale landslides, and conflagrations. The history of seismic sea waves for the past 400 years shows that occasional damage from this source has occurred throughout the West Indies from Cuba eastward along the West Indian island chain to South America. With the exception of the Cumaná region in Venezuela, the southern and western borders of the Caribbean Sea appear to have escaped serious damage from sea waves. Many sections of the west coast of North, Central, and South America have suffered on numerous occasions. In some instances, destructive seismic sea waves have



U.S. Coast and Geodetic Survey

FIGURE 1. MAP OF NORTH AMERICA AND CARIBBEAN AREA SHOWING APPROXIMATE LOCATIONS OF EPICENTERS OF THE SHOCKS LISTED IN THE TABLE BEGINNING ON PAGE 95


WEST INDIES
CARIBBEAN
SEA
Gulf of Panamá
COLOMBIA
VENEZUELA
BRAZIL
BOLIVIA
PARAGUAY
Gulf of Peru
Lima
Caracas
Bogotá
Quito
La Paz
Asunción
Santiago
Buenos Aires
Rio de Janeiro
São Paulo
Salvador
Recife
Porto Alegre
Montevideo
Mendoza
Tucumán
Córdoba
Manaos
Belém
Fortaleza
Natal
Pôrto Velho
Cuiabá
Corumbá
Goiania
Belo Horizonte
Curitiba
Florianópolis
Resistencia
Salta
Iquitos
Pucallpa
Arequipa
Cuzco
Trujillo
Guayaquil
Cali
Medellín
Barranquilla
Maracaibo
Valencia
Ciudad Bolívar
Georgetown
Paramaribo
Cayenne
Trinidad
Barbados
Curaçao
Aruba
Panamá
Puerto Cabezas
Managua
Tegucigalpa
Guatemala
Belize
Mexico
D. F.
Acapulco
Veracruz
Tampico
Monterrey
Chihuahua
Mazatlán
Guadalajara
Havana
Jamaica
Haiti
Puerto Rico (U.S.)
Trinidad
Tobago
St. Thomas
Antigua
Guadeloupe
Martinique
St. Lucia
Barbados
Aruba
Curaçao
Bonaire
Netherlands Antilles
Venezuela
Colombia
Panama
Costa Rica
Nicaragua
Honduras
El Salvador
Guatemala
Mexico
Ecuador
Peru
Bolivia
Paraguay
Chile
Argentina
Uruguay
Brazil
British Guiana
Dutch Guiana
French Guiana
Falkland Islands
Tierra del Fuego
Strait of Magellan
Puerto Deseado
Santa Cruz
Rawson
Neuquén
Bahía Blanca
Santa Rosa
Mackenna
Huinca Renancó
Fernando
Montes de Oca
Ushuaia
Río Grande
Comodoro Rivadavia
Trelew
Esquel
Bariloche
Temuco
Valdivia
Osorno
Puerto Montt
Concepción
Talca
Santiago
Valparaíso
Antofagasta
Iquique
Arica
Tacna
Puno
Arequipa
Cuzco
Ayacucho
Huancayo
Lima
Chimbote
Trujillo
Piura
Talara
Tumbes
Guayaquil
Quito
Esmeraldas
Manta
Portoviejo
Machala
Loja
Cuenca
Ambato
Riobamba
Latacunga
Ibarra
Tulcán
Pasto
Popayán
Cali
Buenaventura
Tumaco
Ipiales
Florencia
Neiva
Ibagué
Manizales
Pereira
Armenia
Cartago
Buga
Palmira
Cali
Popayán
Pasto

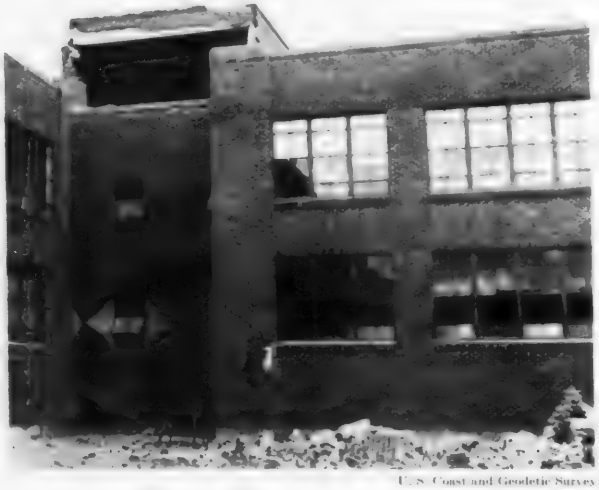
originated at great distances. On at least one occasion a sea wave caused by an earthquake near the Aleutian Islands, west of Alaska, was destructive on the coast of Chile.

It is felt that damage from landslides and fire are too well understood to require further discussion.

From time to time shocks are encountered in which the crustal fracturing extends to the earth's surface. Such fractures sometimes show relative movement of rock masses amounting to several feet, and can be followed along the surface for many miles. The displacements may be horizontal, vertical, or any combination of the two, depending upon the direction in which the stress has been accumulating. In rare instances these differential motions may approach 50 feet, as in the case of the Yakutat Bay earthquake in Alaska in September 1899, where a maximum vertical displacement of 47 feet 4 inches was observed. Figure 5 was taken in the Imperial Valley of Southern California following the earthquake of 18 May 1940, and shows a horizontal displacement of almost 15 feet. In the recent Peruvian earthquake of 10 November 1946, a vertical displacement of 7 feet occurred. It is apparent that roads, railways, pipe lines, and canals crossing such lines of dislocation cannot possibly escape damage.

Aside from the types of damage outlined above, attention should be called to the intangible harm done by a major shock. No community which has been reduced in the brief span of 20 or 30 seconds to a state of almost total ruin recovers when the buildings are rebuilt. The tension created by such an experience and by the complete derangement of normal ways of life cannot fail to have a marked effect on everyone. This emotional situation would never arise in a well built city capable of withstanding major earthquakes.

Those inclined to take a complacent attitude with regard to the earthquake



U. S. Coast and Geodetic Survey

FIGURE 3. HELENA, MONTANA, HIGH SCHOOL AFTER EARTHQUAKE OF 18 OCTOBER 1935

U. S. Coast and Geodetic Survey

FIGURE 4. SAME PORTION OF HELENA HIGH SCHOOL, COMPLETELY DESTROYED BY THE EARTHQUAKE OF 31 OCTOBER 1935

menace may attempt to support their position by contending that the really great losses of life are a thing of the past and were due to construction practices long since abandoned and superseded. Actually, any such claim would be completely misleading. Some outstanding disasters caused by earthquakes have occurred within the present century and three have taken place within the past decade in the Western Hemisphere alone, as is evident from the list of earthquakes found at the end of this article.

Methods of attack on the engineering problem

There are several ways of approaching the strictly engineering problem of designing buildings and other structures to resist earthquakes. The more frequent approaches include observations of the actual destruction wrought by major earthquakes, collection of basic instrumental data on the nature and magnitude of the ground motion in a destructive shock, and experiments with model buildings. Each of these methods will be discussed briefly.

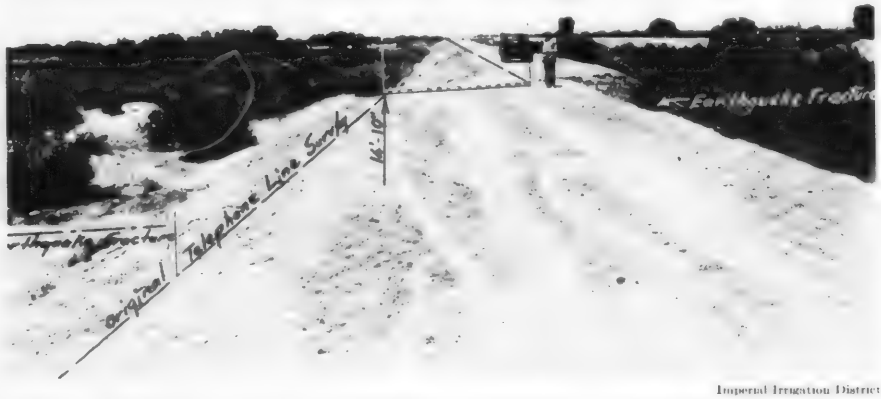
Observations of actual earthquake damage constitute the oldest means of acquiring data for building purposes, and it cannot be denied that the method is highly useful. However, unless a technical observer has some familiarity with materials and methods of construction, structural design, and vibration theory, there is grave danger of misinterpreting observations and of missing the significance of some seemingly unimportant phenomenon. The method has value but is inadequate by itself.

Detailed studies of the ground motions which occur during major shocks constitute a relatively new subject. Such investigations seek to furnish structural engineers with the fundamental information needed for designing earthquake-resistant

buildings on an economical basis. Specially designed seismographs, appropriately termed strong motion instruments, are used to record the motions.

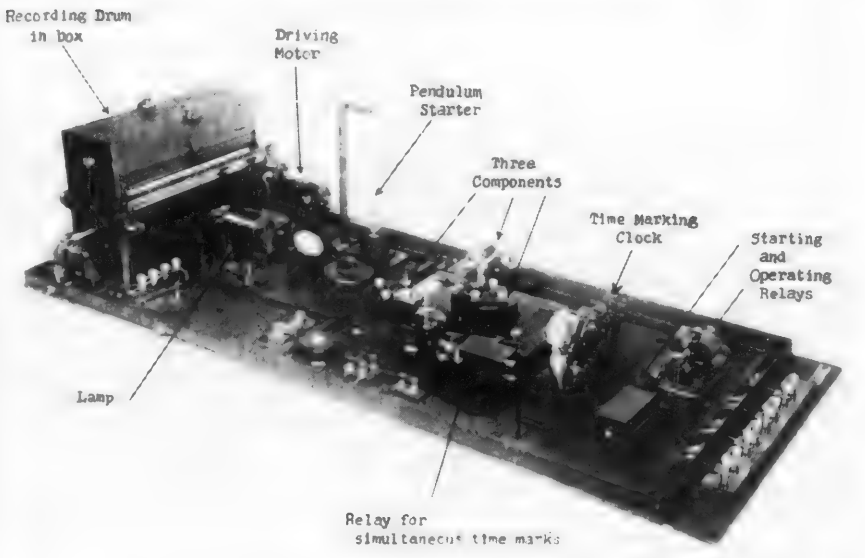
It is important to distinguish between the strong motion instrument and the sensitive type which is used at most of the seismological observatories of the world. The latter instrument is intended to record very weak nearby disturbances and major shocks originating at great distances. This type of seismograph is highly useful in locating earthquakes for the purpose of mapping the seismic zones of the world. Moreover, seismograms recorded on these instruments make it possible to determine the rate of travel of elastic waves through various portions of the earth, thus yielding a picture of its internal constitution. However, such seismographs cannot furnish the strong motion data needed by the engineer. Because of their high magnification, they are promptly put out of commission whenever a severe earthquake occurs in their immediate vicinity. It is in this high intensity area that measurements for engineering purposes must be made. Accordingly, it became necessary to develop new types of instruments which would not record the weak nearby or strong distant shocks, but which would be set into operation the instant strong earthquake motion occurred at the station site and which would remain intact during a nearby major earthquake.

The instruments most generally used in the United States for this work are the *accelerograph* and the *displacement meter*. The primary purpose of each instrument is implied in its name, that is, the former is designed to measure acceleration (rate of change of velocity) and the latter to measure displacement (actual amount of to and fro ground motion in inches or centimeters). Ground displacement can also be obtained by suitable analysis of an



Imperial Irrigation District

FIGURE 5. IMPERIAL VALLEY, SOUTHERN CALIFORNIA, EARTHQUAKE OF 18 MAY 1940, SHOWING HORIZONTAL OFFSET OF IRRIGATION CANAL BANK



U. S. Coast and Geodetic Survey

FIGURE 6. TWELVE-INCH MONTANA-TYPE ACCELEROGRAPH

accelerograph record. Figure 6 shows the general appearance of the accelerograph. Normally the instrument is not in operation, but just as soon as the motion of an earthquake becomes great enough to be of engineering significance, a starting device makes an electrical contact that starts the recording operation within one fifth of a second. Records are made on photographic paper for three elements of motion, two horizontal and one vertical. Inasmuch as the really violent portion of the earthquake motion seldom lasts more than one minute, the apparatus is designed to shut off automatically at the end of about seventy seconds. It is then ready to be set into operation again when another strong shock occurs.

Instruments of this type were first installed in California by the United States Coast and Geodetic Survey about 15 years ago. Subsequently, more were added, including a few in other parts of the western United States and one at Balboa Heights, Canal Zone. There are approximately 50 instruments at present. Data for moderately strong nearby earthquakes have been obtained in considerable quantity, as well as a few records of really severe seismic motions. One of the most valuable records thus far is that from the accelerograph at El Centro in the Imperial Valley of Southern California on 18 May 1940. A portion of this accelerogram is reproduced in figure 7. The acceleration scale is in terms of gravity. Thus, for example, 0.2 g means an acceleration of two tenths that due to gravity.

It was realized that valuable records could be obtained with these instruments in other active seismic zones of the Western Hemisphere. Accordingly, in 1944, as one of the projects of the United States Interdepartmental Committee on Scien-

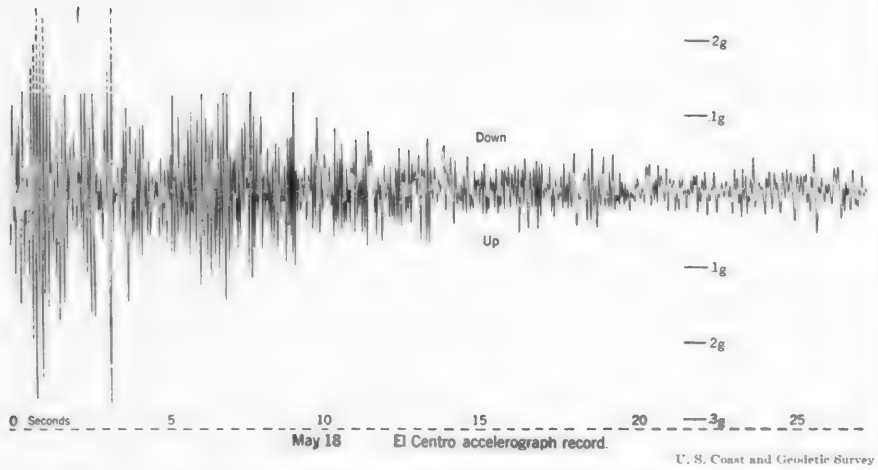


FIGURE 7. EL CENTRO, CALIFORNIA, STRONG MOTION RECORD, 18 MAY 1940

tific and Cultural Cooperation, the United States Coast and Geodetic Survey dismantled two of its accelerographs and reinstalled one at Santiago, Chile, and the other at Lima, Peru. The following year two more instruments were transferred to South America and installed at Quito, Ecuador, and Bogotá, Colombia. In 1947, similar instruments were sent to Guatemala City, Guatemala, and to San José, Costa Rica. Several records of moderately strong earthquake motion have already been obtained at Lima and Santiago. A minor record was obtained at Guatemala City on 5 June 1947, less than two weeks after the instrument was installed.

In this connection it is of interest to note that the Instituto Sismológico in Chile is building four accelerographs similar to those in use in North America. These insruments will undoubtedly contribute much to our knowledge of destructive earthquake motion.

Within the last two decades some attempts have been made to determine earthquake stresses in engineering structures by means of models. An apparatus for this purpose was built at the Vibration and Earthquake Laboratory of Stanford University. A steel platform approximately 10 x 12 feet was mounted on four streetcar wheels and was anchored to a concrete pier by means of springs which could be arranged in different combinations to give a wide range of vibration rates or frequencies. Thus, with different spring arrangements the oscillations of the platform could be made to simulate the simple horizontal ground motions which have been observed during earthquakes. In most of these experiments motion was imparted to the table by raising a 17-foot pendulum several degrees out of the vertical position and allowing it to swing down against a bumper spring at the end of the table. Amplitude of the table motion was controlled by varying the angle through which the pendulum was raised. The vibration period of the table remained constant unless the anchor springs were rearranged. After striking the bumper spring the pendulum was caught by a

ratchet device to prevent it from striking the table again until released for a new test. Following the blow of the pendulum the table oscillated in its natural period of vibration with decreasing amplitude until friction brought it to rest. It should be emphasized that the table motions produced were highly idealized compared to the extremely complex motion characteristic of the epicentral[1] region of a severe earthquake. In some respects, however, the simpler motion is an advantage for experimental work.

Nevertheless, in some cases it is desirable to reproduce the actual horizontal ground motion of an earthquake. This can be done with a cam, the circumference of which has been shaped in conformity with observed horizontal ground oscillations. This was done several years ago in a laboratory at the Massachusetts Institute of Technology. It was necessary to devise a complicated apparatus in order to impart actual observed earthquake motion to the shaking table. This apparatus has been used to test models of elevated steel water tanks and also to test accelerographs. In the latter experiments it was possible to prove the accuracy of computing methods used in the analysis of accelerograph records.

About ten years ago a model of a sixteen-story building was the subject of extensive experiments at Stanford University. The weight of each floor and the rigidity of the walls and frame for each story were made 1:125,000 those of the prototype, the rigidities being simulated by helical springs for the horizontal direction and by flat plate springs for the vertical direction. When the shaking table was subjected to oscillatory motion, the maximum deflection of each story with respect to those above and below was measured by means of indicators. Inasmuch as the spring constants (corresponding to the wall rigidities of the actual building) were known and the actual deflections of the springs were measured during a test by the indicators, it was a comparatively simple matter to determine the maximum force produced between any two stories during the vibratory motion of the shaking table. Furthermore, by substituting springs of different stiffness in the model, one could predict the effect of varying the wall rigidity for the corresponding floor of an actual building.

Thus far only a beginning has been made with model studies, but enough has been done to indicate the very great potentialities of the method. When model data have been accumulated for many types of buildings subjected to a wide range of assumed ground motions, the structural engineer will be better able to judge how to design an earthquake resistant building.

[1] *The epicenter of an earthquake is the point on the earth's surface directly above the focus, or point of origin within the earth.*

Annotated List of the More Noteworthy Earthquakes Occurring in the Western Hemisphere During the Past 150 Years

It cannot be emphasized too strongly that the following tabulation is intended to indicate only in a general way the distribution of the more noteworthy earthquakes. It is believed that by and large the list would be acceptable to most seismologists. Nevertheless, it is particularly difficult to define a noteworthy shock, because an earthquake of moderate energy, if centered in or near a heavily populated area, may be far more destructive than a much stronger shock in a sparsely inhabited region. For example, the Long Beach, California shock of 10 March 1933

was not of first order intensity; yet it did infinitely more damage because of its location than the major shock in Nevada on 20 December 1932. Many other similar cases could be cited. Consequently, there could be legitimate differences of opinion with regard to certain earthquakes included or omitted from the tabulation. Furthermore, the shocks listed here must be looked upon as conspicuous examples rather than as a complete record of destructive earthquakes for the period under consideration. If any attempt were made to list all the shocks which have done serious damage, the table would expand greatly.

It is realized that some inconsistency may be involved in the relatively large number of recent shocks which have been listed for the United States of America. However, if any of these had been omitted, a false impression might have been obtained that certain regions were completely immune from strong shocks.

No major shocks are known to have occurred within Brazil or Uruguay. However, it is of interest that Brazil occasionally experiences earthquakes capable of doing minor damage over very limited areas. Such slight disturbances have occurred both at Bom Sucesso in the State of Minas Gerais and in parts of Northeastern Brazil.

Date	Country	Region	Remarks
1797 Feb. 4	Ecuador	Andean	Latacunga, Riobamba, Guaranda, and Alausí completely destroyed. Several villages buried by landslides. Thousands of lives lost.
1800 Mar. 8	Mexico	Mexico City	Heavy damage.
1811 Dec. 16 1812 Jan. 23 1812 Feb. 7	U. S. A.	Epicenter near New Madrid, Mo.	Shocks perceptible over an area of 1,000,000 square miles; epicentral region showed changes of elevation over large areas. Region sparsely inhabited, consequently property damage and loss of life small.
1812 Mar. 26	Venezuela	Caracas to Mérida.	Destruction in Caracas, La Guaira, Maiquetía, San Felipe, El Tocuyo, Barquisimeto, and Mérida. Estimated 40,000 lives lost.
1821 July 10	Peru	Southern coast	Heavy damage in vicinity of Caraveli with loss of over 160 lives; some damage and several lives lost in Arequipa.
1822 May 7	Costa Rica	Central	Serious damage at Cartago.
1822 Nov. 19	Chile	Coastal region near Valparaíso.	Felt along coast from Copiapó to Concepción and as far east as San Juan and Mendoza in western Argentina. Destruction at Quillota, Valparaíso, and Melipilla; considerable damage in Santiago. Many miles of coast uplifted several feet. Seismic sea wave produced.
1826 Sept. 18	Cuba	Santiago	Santiago partly destroyed.
1827 Nov. 16	Colombia	Pasto to Bogotá	Damage in Bogotá, Ibagué, Neiva, and Popayán. Floods in Magdalena and Cauca Valleys.
1835 Feb. 20	Chile	Coastal region near Concepción.	Felt along coast from Copiapó to Isla Chiloé, eastward into Argentina, westward to Juan Fernández Islands. Concepción, Talcahuano and Chillán suffered most severely. Coastal uplift of several feet, especially on Santa María Island. Seismic sea waves observed over 1,100 miles of coast. Height of waves at Talcahuano 25 feet above normal high water.

Date	Country	Region	Remarks
1842 May 7	Haiti and Dominican Republic.		Môle St. Nicolas, Port-de-Paix, Cap-Haïtien, and Santiago de los Caballeros ruined. Damage to coastal settlements from seismic sea wave. Great loss of life.
1857 Jan. 9	U. S. A.	Southern California.	Major shock which would have been disastrous in a thickly populated area. Surface fracturing occurred with relative displacement of adjacent crustal blocks.
1861 Mar. 20	Argentina	Province of Mendoza.	City of Mendoza destroyed with loss of 6,000 lives.
1868 Aug. 13	Peru, Bolivia, and Chile.	Southern Northern	Arequipa destroyed; over 2,000 lives lost. Seismic sea wave extending from Trujillo, Peru to Concepción, Chile caused extensive damage.
1868 Aug. 16	Ecuador	Andean	Several towns, including Ibarra, almost completely destroyed. Estimated loss of 40,000 lives. Considerable damage in Quito. Landslides.
1870 May 17	Mexico	Oaxaca	Heavy damage in Oaxaca and vicinity. One hundred lives lost.
1872 Mar. 26	U. S. A.	Eastern California.	Strong shock in sparsely inhabited area. Centered in Owens Valley, felt over many thousands of square miles. About 30 lives lost. Surface fracturing and displacement forming scarps in Owens Valley.
1873 Mar. 4	El Salvador	San Vicente	Complete destruction of San Vicente. Eight hundred lives lost.
1873 Mar. 19	do	San Salvador	Heavy damage in city of San Salvador.
1874 Sept. 3	Guatemala	Antigua	Very heavy damage in ruins of Antigua. Over 100 lives lost.
1875 Feb. 11	Mexico	Guadalajara	San Cristóbal destroyed with loss of 70 lives. Guadalajara damaged.
1875 May 18	Colombia and Venezuela.	Northeastern Western	Cúcuta, Colombia was mass of ruins. Many other communities seriously damaged. Hundreds of lives lost. Considerable damage and some loss of life in Táchira, Venezuela.
1875 Dec. 8	Puerto Rico	Arecibo	Damage in city of Arecibo.
1877 May 9	Chile	Tarapacá	Strong and destructive shock, followed by seismic sea wave of considerable magnitude. Waves observed at Punta Arenas, New Zealand, Australia, Japan, and California.
1879 Feb. 2	Chile	Straits of Magellan.	Damage at Punta Arenas.
1880 Jan. 25	Cuba	Western	Felt over entire Island and in parts of Mexico and Florida. Destructive at San Cristóbal.
1882 Sept. 7	Panama	City of Panama	Damage in Panama City with some loss of life. Some damage in Colón. Broke oceanic cables. Felt as far as Nicaragua and northern Colombia and Venezuela.
1886 Aug. 31	U. S. A.	Charleston, South Carolina.	Great damage at Charleston and nearby towns. Some damage at Savannah, Augusta, and Columbia, Georgia. About 60 lives lost. Shock felt as far as Milwaukee, Wis.; Boston, Mass.; Bermuda, and Cuba.
1887 May 3	Mexico	Sonora	Strong shock felt from Toluca to Albuquerque and Santa Fe, N. Mex.; and from Guaymas and Yuma, Ariz., eastward 60 miles beyond El Paso, Texas. Damage at Bavispe.

Date	Country	Region	Remarks
1899 Sept. 3..... Sept. 10.	Alaska.....	Southeastern....	Very severe shocks but area of greatest disturbance was uninhabited. Important changes in topography; beaches raised a maximum of 47 feet above original location.
1900 Oct. 29.....	Venezuela.....	Northern.....	Considerable damage in Caracas and other cities on and near the coast.
1902 Feb. 26.....	El Salvador.....	Salvadorean coast	Seismic sea wave devastated villages of Santiago and Barra del Paz. Nearly 200 lives lost.
1902 Apr. 13.....	Guatemala.....	Southwestern....	Felt from southern Mexico to Nicaragua. Cities of Quezaltenango and San Marcos completely destroyed as well as a dozen villages. Numerous lives lost.
1906 Jan. 31.....	Ecuador and southern Colombia.	Centered in coastal region.	Severe damage at Esmeraldas (Ecuador) with some damage in southern Colombia at Pasto, Popayán, Cali, and Manizales; and in Ecuador at Quito, Guayaquil, and Alausí.
1906 Apr. 18.....	U. S. A.....	Central California.	One of the greatest shocks known in the United States. Very severe damage caused directly by earthquake in San Francisco and in cities to north and south. Fires could not be controlled because of damage to water supply system. Total damage estimated at $400,000,000. Several hundred lives lost. Surface fracturing of ground along San Andreas Fault for distance of 270 miles with maximum horizontal shift of adjacent crustal blocks of 21 feet.
1906 Aug. 16....	Chile.....	Valparaíso area.	Great destruction at Valparaíso and many neighboring towns. Several thousand lives lost. Several lengths of coastline were apparently uplifted to a maximum of 2½ feet. Shock felt northward to Iquique (lat. 20° S.), eastward to Corrientes Province (Argentina), southward through Buenos Aires to Bahía Blanca, and westward to Isla Chiloé on the Chilean coast (lat. 42° S.)
1907 Jan. 14.....	Jamaica.....	Kingston.....	Majority of buildings in Kingston damaged. Portion of harbor was lowered 30 feet. Ports of Annotto Bay and Buff Bay on north side of Island suffered greatly.
1910 May 4.....	Costa Rica.....	Central.....	Damage heavy at Cartago. San José seriously affected. Several hundred lives lost.
1912 Nov. 19....	Mexico.....	Centered about 70 miles northwest of Mexico City.	Heavy damage in Temascalcingo, Tixmadeje, Acambay, and Timilpan. Many lives lost. Crustal block about 12 miles wide apparently dropped between parallel faults about 2 feet.
1913 Oct. 2.....	Panama.....	Azuero Peninsula.	Destructive shock, particularly at Macaracas in Los Santos Province. Landslides and breaking of under-sea cables.
1913 Nov. 14.....	Peru.....	Coastal district of southern Peru.	Near Caraveli the villages of Capaya, Cartuacan, Puento, Sanaica, and Toroya were left completely in ruins; many other places were seriously affected. More than 200 lives lost.
1915 Oct. 2.....	U. S. A.....	Nevada.....	Extremely energetic shock which would have been disastrous in a heavily populated area. Surface displacement along 22 miles of the fault with maximum movement vertically of 15 feet.

DATE	COUNTRY	REGION	REMARKS
1917 Aug. 31....	Colombia.....	Bogotá region...	Centered east of Bogotá. Some damage in Bogotá.
1918 Oct. 11.....	Puerto Rico.....	Northwestern...	Widespread damage in towns in western Puerto Rico. Moderate seismic sea wave added to havoc. Over 100 lives lost.
1919 Apr. 28.....	El Salvador.....	San Salvador and vicinity.	Great damage in and near city of San Salvador. Many casualties.
1922 Nov. 10....	Chile.....	Atacama Province.	Shock was of destructive violence from La Serena to Potrerillos with especially severe effects at Vallenar and Copiapó. Seismic sea wave of moderate height caused additional damage.
1929 Jan. 17.....	Venezuela.....	Cumaná.....	Extensive damage in city of Cumaná. Some loss of life.
*1929 Nov. 18...	Newfoundland..	Submarine shock centered south of Newfoundland.	A major shock, but centered well away from land. Widely felt in eastern Canada and the New England States. Twelve submarine cables broken. Seismic sea wave 30 feet high at Placentia Bay, south coast of Newfoundland, flooded several villages and caused a loss of about 30 lives.
1931 Jan. 14.....	Mexico.....	State of Oaxaca.	City of Oaxaca almost completely destroyed. Great damage in other parts of the State. Shock was of sufficient strength to produce a few wall cracks as far away as Mexico City.
1931 Mar. 31....	Nicaragua.....	Managua.....	Severe local earthquake caused collapse of numerous buildings in western part of city. A conflagration followed, consuming most of the city. Estimated 2,000 lives lost.
1931 Aug. 16....	U. S. A.....	Western Texas..	Total felt area in U. S. A. and Mexico estimated at 450,000 square miles. Considerable damage in the vicinity of Valentine, Texas.
1932 Feb. 3.....	Cuba.....	Eastern.....	Considerable damage at Santiago.
1933 Mar. 10....	U. S. A.....	Southern California.	Shock of moderate energy centered near a heavily populated section did damage estimated at $50,000,000. About 120 lives lost.
1934 Mar. 12....	U. S. A.....	Northern Utah..	Felt area 170,000 sq. miles. Damage relatively slight because region is sparsely inhabited.
1935 Aug. to 1936 July.	Colombia.....	Southern.....	Series of shocks causing damage at Pasto and other towns, and completely destroying Túquerres in July 1936. Several landslides, one burying completely the village of La Chorrera with a loss of two or three hundred lives.
1935 Oct. 18..... Oct. 31.	U. S. A.....	Montana.....	Centered close to Helena. October 18 shock felt over area of 230,000 sq. mi.; October 31 shock over 140,000. Total damage at Helena about $4,000,000.
1939 Jan. 24.....	Chile.....	South-central...	Chillán almost completely destroyed. Concepción very seriously affected. Loss of life at least 10,000 in Chillán alone.
1940 May 18.....	U. S. A.....	Southern California.	Severe shock in Imperial Valley, 9 lives lost, damage about $6,000,000 in U. S. with considerable damage in Mexico. Surface fracturing along fault line with maximum relative displacement horizontally of 15 feet.

DATE	COUNTRY	REGION	REMARKS
1940 May 24.....	Peru.....	Callao.....	Serious damage in and near Callao. Over 200 lives lost.
1942 May 13.....	Ecuador.....	Guayaquil.....	Heavy damage in Guayaquil and in other parts of the coastal region; about 200 lives lost.
1944 Jan. 15....	Argentina.....	San Juan Province.	City of San Juan practically destroyed. Loss of life several thousand.
*1944 Sept. 5...	Canada and U. S. A.	Cornwall, Ont., and Massena, N. Y.	Felt throughout the northeastern United States and in the Canadian provinces of Quebec and Ontario. Damage estimated at $2,000,000.
1946 Feb. 14.....	U. S. A.....	State of Washington.	Felt over at least 200,000 sq. miles, but maximum intensity was moderate, causing serious damage only in isolated instances.
1946 Apr. 1.....	Alaska.....	Aleutian Islands.	Severe submarine shocks centered south of Unimak Island and produced seismic sea waves which caused great property damage and considerable loss of life in the Hawaiian Islands.
1946 June 23.....	Canada.....	Province of British Columbia.	Widely felt in British Columbia and in western Washington. Most of the damage occurred on Vancouver Island.
1946 Aug. 4....	Dominican Republic.	Northeastern....	Considerable destruction in the northeastern part of the Republic. Matanzas suffered greatest damage. Moderate seismic sea wave caused additional damage at points along north coast. About 75 lives lost.
1946 Nov. 10.....	Peru.....	Northern Ancash and southern La Libertad.	Heavy damage in Conchucos, Quiches, Sihuas, and Mayas. Great landslides. Vertical displacement along fault of 7 feet. Loss of life probably about 1,500.

*Other strong earthquakes in Eastern Canada causing some damage include those on October 17, 1860, October 20, 1870, Feb. 28, 1925, and November 1, 1935.

In Our Hemisphere—XIV

Some New World Contributions to Good Eating

Cacao—Food for the Gods

Of all the products that the Americas have given to the world, probably none has a more interesting history than cacao, "the chocolate tree."

Cacao is believed to have originated in the Amazon Basin in Brazil, the Orinoco Basin in Venezuela, or in Central America, and in the course of pre-Conquest centuries the seeds were carried by Indians throughout tropical America. Cortés and his men found the Aztecs using cacao beans both as a food-drink (which they called *chocolatl*) and as money. According to an Aztec legend, Quetzalcoatl brought the seeds of cacao trees from heaven and planted them in his garden. And the Swedish botanist, Linnaeus, in giving the plant its scientific name, called it *theobroma*—food for the gods.

Cacao and utensils for preparing the Aztecs' *chocolatl* were taken to Spain by Cortés himself when he went back in 1528. Europeans did not like the taste of the Aztec drink, however, and it was not until the pleasing results of mixing cacao with vanilla, cinnamon, and sugar were discovered that the new product took hold. After that the use of cacao spread rapidly among those Europeans who could afford to purchase it, and it was of course widely used in the Spanish and Portuguese colonies. In describing a collation at Bogotá in 1813, José María Vergara y Vergara said that the chocolate used had been mixed with cinnamon and wine and matured for eight years, and exclaimed, "Grecian Muse, thou who art the fountainhead of Fancy, tell me how to make the fragrance of that chocolate of colonial days reach the nostrils of my fellow citizens of today."[1]

Chocolate was first made in the United States in 1765 in a mill in Dorchester, Massachusetts. The cacao beans were brought to this country during that period by New England traders, in exchange for commodities that they carried down to tropical American countries. It was not until the nineteenth century, however, that

[1] *See A Cup of Chocolate*, Bulletin, *August 1931 p. 823.*

A CACAO TREE AT HARVEST TIME

Under cultivation the cacao tree is kept at a height of from 15 to 25 feet. It begins to produce when about five years old, reaches maximum productivity in its eighth year, and continues bearing from 30 to 80 years.

OPENING CACAO PODS

Twice a year workers on cacao plantations gather the pods from the trees, cut open the semi-woody shells with machetes, and place the beans in trays for fermentation.

the cost of cacao fell to the point where its use could spread generally throughout the world. Since the beginning of the present century the demand for cacao has increased rapidly, largely as a result of the development of cocoa powder preparations, the ever-widening variety of manufactured chocolate confections, the rise of the soda fountain, and the perennial popularity of chocolate cake.

There are two main types of cacao trees—the delicate, aristocratic *criollo*, which produces the best quality beans, and the hardier, more prolific *forastero*. Cacao trees require fertile soil, a hot climate, heavy rainfall, and an altitude not over 2,500 feet. The trees are kept at a height of from 15 to 25 feet so that they will yield the most fully developed fruit. The ripe pods, about 6 to 10 inches long, range in color from crimson to yellow and orange, according to variety, and are attached directly to the trunk or to large branches. A pod contains from 20 to 50 seeds, the cacao beans of commerce. Each is about the size of a large lima bean.

Although cacao originated in the Americas, about two-thirds of the world's cacao exports are now furnished by West Africa and one-third comes from Latin America. Since 1900 the production of both areas has increased, but that of West Africa has gone ahead at a much faster rate. However, cacao remains a major export crop in Brazil, Costa Rica, the Dominican Republic, Panama, Ecuador, and Venezuela. In some countries, a virus disease called witch's broom has made heavy inroads on production. The United States is the largest cacao user; it imports about 40 percent of the total world supply.

When the dried cacao beans reach the manufacturer they are roasted in revolving drums and then placed in a machine which cracks them, separates the larger

beans from the small, and removes the shells from the kernels or "nibs." The beans are next conveyed to mills where they are crushed between grinding stones. The grinding generates heat which melts the butter content of the nibs, and a thick brown chocolate "liquor" emerges. When cooled in molds this becomes the product known as unsweetened chocolate. To make sweet chocolate, sugar and flavoring matter are added in large revolving pans by means of granite rollers. Other rollers and refiners further crush the chocolate until a smooth, mellow product is achieved.

To make cocoa, the chocolate "liquor" mentioned above is placed in pots lined with camel's hair, hydraulic pressure is applied to the mass and the by-product known as cocoa butter flows out of vents at the bottom. Cocoa butter is widely used in pharmaceutical and toilet preparations and in the manufacture of chocolate confections. The dry, cake-like substance that remains in the pots is ground into powder and then sifted, to form cocoa.

It is said that among the Honduran Indians a young man would send a married woman to the home of the girl of his choice with a supply of cacao sufficient for the first celebration of the wedding he hoped would take place. By accepting his gift the girl signified her consent. In return, the bride-to-be sent more cacao to her suitor for two gatherings—one at his dwelling and the other at hers. To this day, in some countries, if a Latin American asks his friend, "When are you serving chocolate?" he means "When are you going to be married?"

The Story behind a Dish of Tapioca

"What's for dessert tonight, Mom?" asked Bill as the Allens were finishing the first course of their Thursday night dinner.

"Tapioca, dear," replied Mrs. Allen, rising and starting to clear the table.

In a helpful mood for once, Bill swallowed his teen-age scorn of domesticity and went into the kitchen to get the heaping dishes of fluffy tapioca, each topped with a bright red cherry. He sat down and looked quizzically at the mouth-watering treat.

"Where does tapioca come from, Dad?" he asked.

"Why, er . . . ah . . . from . . . well, son, you'd better ask your Mother."

"I'm afraid I don't know either, Bill," said his Mother as he turned to her. "Why don't you ask your geography teacher about it tomorrow?"

Bill did, and this is what he found out.

Tapioca comes from the tuberous roots of a large, shrubby plant that grows wild or under cultivation in many tropical countries. This plant has various names, but the most common are manioc, mandioca, yuca, and cassava. There are two main types of manioc—the "bitter" varieties, which contain varying amounts of poisonous acids and have to be especially prepared before they are edible, and the "sweet" varieties, containing practically no poisonous acids.

The known history of manioc goes back to the days of the conquistadors. When the Spaniards and Portuguese first came to the New World they found the plant under cultivation on the Caribbean Islands and on the mainland from Mexico to Uruguay on the east coast and as far south as Peru on the west coast. Just where and when it was first grown is not known for certain, but since the greatest concentration of both wild and cultivated species is in Brazil, most botanists believe that country to be the original habitat.

During the 16th century Portuguese traders carried the plant to Africa and India; in the 17th the Portuguese, Span-

Courtesy of U. S. Department of Agriculture

MANIOC, OR CASSAVA, FIELD IN BRAZIL

The total acreage, tonnage, and distribution of manioc place it among the 10 most important plants that the Americas have contributed to world economy.

iards, and Dutch introduced it into South China, Malaya, and the East Indies; and during the 18th and 19th, manioc finished its circuit of the world's tropical countries, becoming an important item in the diet of native populations in all of them.

Today the total acreage, tonnage, and distribution of manioc place it among the ten most important plants that the Americas have contributed to world economy. It is easily cultivated and, according to some authorities, can produce more food by weight per unit of area than any other plant.

In spite of the widespread cultivation of manioc, relatively few countries export its finished products. Before the war the Dutch East Indies were the leading exporter, followed distantly by British Malaya and Indo-China. During the war years the Americas, notably Brazil and the Dominican Republic, were called upon to furnish greatly increased supplies of manioc products.

There is no limit to the food uses for manioc in the countries where it is grown. The roots are peeled and then boiled or baked for use as a vegetable, or they are grated into meal and cooked by steaming to form a flat bread. Thick native drinks are made from the flour, and the juice of the sweet manioc is used for making intoxicating beverages. In Brazil one of the

many uses for manioc flour is in combination with corn meal, shrimps, oysters, and hard boiled eggs in a delicious steamed dish called *cuzcuz;* from manioc meal Brazilians make a mixture called *farofa* for use as stuffing for roast turkey, chicken, and pork. In the Dominican Republic manioc, or yuca as it is called there, is peeled, cooked, and put into the national dish, *sancoche*, a kind of stew. It is also used in that country to make *casabes* (flat-tasting pancakes) and a bread fried in deep fat which is similar to shortening bread. In the United States where the plant (here called cassava) is grown in Florida and other Gulf States, it is used chiefly as a livestock feed.

Besides these food uses for manioc there is an ever-widening assortment of industrial uses. Commercial products derived from the plant include manioc meal and flour, tapioca flour or starch, and tapioca flake and pearl. Manioc is now one of the world's three most important commercial sources of starch—corn and potatoes being the other two. Tapioca flour is in great demand by most starch-using industries in the United States. Textile manufacturers, for example, use it to finish and give body to cloth and to smooth warp threads for weaving. Tapioca is also used widely for dextrines and adhesives and for some types of explosives. Nitrostarch explosives made with tapioca are considered to be the safest of all high explosives.

Of course, the manioc product best known to United States housewives and their dessert-loving husbands and children is the pearl tapioca used for puddings. To make this product, moist manioc starch, separated from the fibrous and nitroge-

Courtesy of *Revista de Agricultura, Comercio y Trabajo* of Habana

MANIOC, OR CASSAVA, TUBERS

The large tubers of manioc plants have a wide variety of uses. As vegetables and in the form of flour and meal they constitute a major item in the diet of tropical peoples throughout the world. Industrially, they are used to make many products, from high explosives to pearl tapioca for puddings.

nous contents of the roots, is spread on iron plates. Then enough heat is applied to cause the starch granules to form irregular pellets. When cooled these become the familiar hard, translucent grains that the housewife finds on her grocer's shelf.

Biography of the Brazil Nut

One of the pleasures that postwar years have brought again is the sight of Brazil nuts once more nestling enticingly in the nut bowls of American families. The life story of these popular products of Brazil begins in the vast Valley of the Amazon at the top of giant trees which, rising to heights of from 75 to 150 feet, tower in stately grandeur over the other trees of the jungle.

Photograph by Ynês Mexia

BRAZIL NUT TREE IN THE AMAZON VALLEY

Brazil nuts grow at the top of giant trees which, rising to heights of from 75 to 150 feet, tower in stately grandeur over the other trees of the jungle.

The rich, bland nuts we eat are really the seeds of the hard, coconut-shaped pod that is the fruit of these Brazil nut trees. The pods are called *ouriços* by the Brazilians, and the nuts, *castanhas do Pará*—Pará chestnuts. Each pod contains from 12 to 20 Brazil nuts, arranged somewhat like the sections of an orange. Because of the size of the trees, the *caboclos* or jungle dwellers who gather the pods have to wait until they fall to the ground before they can get at them. As the pods weigh from two to four pounds and fall at terrific speeds, the *caboclos* do not risk their lives by being under the trees on windy days. Such days are usually spent chopping open the pods, washing the nuts, and putting them in baskets for delivery to the nearest trading post. *Caboclos* generally receive their pay at the current market rate in such items as hardware, matches, cotton cloth, mandioca flour, dried beef, and sugar. The size of the Brazil nut crop in any one year is determined largely by whether or not the price being offered is high enough to make the work of gathering them worth while.

The hundreds of trading posts that are scattered through the Amazon Basin send their Brazil nuts by river to the export centers of Manaus and Belém. At these ports the nuts are sold through brokers to exporters or to shellers.

Brazil nuts play a vital part in the economic life of the Basin. Their export value in most normal years is exceeded only by that of rubber. Brazil has a virtual monopoly on the nuts, as the quantity produced in the other countries of the Amazon Basin is small.

BRAZIL NUTS IN OUTER SHELL

Trade in the nuts dates back as far as 1633 when the Dutch, then in control of part of the Brazilian coast, were exporting them as "wild oil fruits." Before World War I only unshelled nuts were exported, and all the shelling was done abroad. After that war, however, a shelling industry was started in Brazil, and now there are eight shelling plants in Belém, five in Manaus, and two in Acre. Brazil, of course, perfers to export shelled nuts as this provides employment for its citizens and brings in more foreign exchange. Trade in Brazil nuts came to a standstill during World War II, since the limited shipping facilities had to be devoted to rubber, minerals, and other strategic products, but by mid-1946 the nuts were back on the market again. With what amounts to an unlimited supply (nuts are harvested from about 100,000 trees every year, and hundreds of thousands of other trees are never touched), the industry is eager for expansion.

The United States is the best customer of Brazil nut producers. In most years they are imported into this country in larger quantities than any other foreign nut except cashews, and rival such domestic varieties as walnuts and pecans. Brazil nuts have been traditional holiday treats on American tables for generations. In Boston they are still called "castanas" after the name brought back by the captains of the Yankee clippers, which used to take apples and ice to Brazil for Christmas.

Here are some Brazil nut recipes you might like to try:

BRAZIL NUT ONE-EGG CAKE

2 cups sifted cake flour
3 teaspoons baking powder
¼ teaspoon salt
½ cup butter or other shortening
1 cup sugar
1 egg, well-beaten
¾ cup Brazil nuts, chopped
⅔ cup milk
1 teaspoon vanilla

Sift flour, baking powder, salt. Cream butter, add sugar gradually, and cream until fluffy. Add

egg. Beat 1 minute. Add Brazil nuts. Add sifted dry ingredients alternately with milk. Add vanilla. Bake in one 8-inch square pan, in moderate oven (350° F.) 50 minutes. In muffin or layer pans (375° F.) 25 to 30 minutes.

Quick Brazil Nut Fudge

4 squares chocolate
2 tablespoons butter or margarine
¼ teaspoon salt
1 teaspoon vanilla
1 lb. sifted confectioner's sugar
⅓ cup milk
1 cup chopped Brazil nuts
whole Brazil nuts

Melt chocolate and butter over hot water. Stir in salt and vanilla. Stir in sugar alternately with the milk, keeping pan over hot water. Remove from heat and stir in Brazil nuts. Pour fudge in a 7-inch square pan. Garnish with Brazil nuts, cut in halves. Let stand several hours. Cut in squares.

Material for Pan American Day

April 14, 1948

To assist groups planning to observe Pan American Day, the Pan American Union offers for free distribution in English, Spanish or Portuguese the material listed below. The limited supply, however, makes it possible to send material only to teachers or adult groups.

MANUAL FOR STUDENTS AND TEACHERS. A handy pamphlet packed with ideas and suggestions for classroom use:

- Youth of the Americas—Round Table Forum
- Four folk dances (Brazilian, Peruvian, Uruguayan, Costa Rican) with instructions for performing and sketches of costumes.
- Calendar of important inter-American dates.
- Suggestions for classroom projects using outline map of the Americas.
- Quotations from speeches of contemporary statesmen.

POSTER. A graphic portrayal of the slogan *THE AMERICAS MUST SERVE MANKIND.*

BOOKLET—*The Inter-American System.* Illustrated with photographs, maps, and charts. Distributed for Pan American Day 1947.

RADIO PROGRAM—*House of the Americas.* Aims and achievements of the Pan American Union.

THREE-ACT PLAY—*Blue Blood,* by Demetrio Aguilera-Malta and Willis Knapp Jones. A light comedy woven around the theme of understanding our neighbors.

PROGRAM SUGGESTIONS FOR PAN AMERICAN DAY, such as exhibits, parades, forums, radio, press, and visual aid projects. Distributed for Pan American Day 1947; limited number of copies.

SELECTED LIST—Directory of Latin American Song Books and References for Guidance in Planning Programs of Music and Dances. Sixth edition, revised.

ILLUSTRATED BOOKLET—*Coffee, The Story of a Good Neighbor Product.* Distributed for Pan American Day 1947; limited number of copies.

PROGRAM AIDS. A directory of materials for Pan American Day, including flags, music, maps, pictures, and dolls, with catalogue listings and prices. Bibliography of recent United States books and magazine articles on Latin America.

REPORT ON THE RIO CONFERENCE. Mimeographed monograph on the Inter-American Conference for the Maintenance of Continental Peace and Security.

SUGGESTIONS FOR PAN AMERICAN CLUBS. Mimeographed pamphlet on how to organize a club and plan the programs.

LIST OF PUBLICATIONS ISSUED BY THE PAN AMERICAN UNION.

For items desired address:

Department of Information,
Pan American Union,
Washington 6, D. C.

Pan American Union NOTES

Inter-American Economic and Social Council

THE Inter-American Economic and Social Council has elected as its President for the year 1947–48 Doctor Antonio Carrillo Flores, Mexican Representative, and as Vice-President Doctor M. A. Falcón Briceño, Venezuelan Representative and Minister-Counselor of the Venezuelan Embassy in Washington.

Dr. Carrillo, an eminent Mexican economist and Director of the "Nacional Financiera," was appointed by his government as delegate to the Council in September of 1947.

The members of the Council are as follows:

ARGENTINA:
- Señor Juan Arturo Mercau (*appointed Delegate but has not yet arrived*)
- Señor Dr. Miguel A. Zeballos (*Alternate Delegate*)
- Señor don Rubén J. Dussaut (*Alternate Delegate*)

BOLIVIA:
- Señor don Germán Rovira (*Delegate*)

BRAZIL:
- Senhor Gilberto Amado (*Appointed Delegate but has not yet arrived*)
- Senhor Sergio Corrêa da Costa (*Alternate Delegate*)

CHILE:
- Dr. Félix Nieto del Río (*Delegate*)
- Señor don Mario Illanes (*Alternate*)

COLOMBIA:
- Dr. Antonia Rocha (*Delegate*)

COSTA RICA:
- Señor don J. Rafael Oreamuno (*Delegate*)

CUBA:
- Dr. Guillermo Belt (*Delegate*)
- Dr. Ricardo Sarabasa (*Alternate*)
- Señor Enrique Pérez Cisneros (*Alternate*)

DOMINICAN REPUBLIC:
- Señor Dr. Joaquín E. Salazar (*Delegate*)

ECUADOR:
- Señor don Osvaldo García (*Delegate*)

EL SALVADOR:
- Dr. Héctor David Castro (*Delegate*)
- Señor don Carlos Siri (*Alternate*)
- Señor Dr. Rubén Ventura Gomar (*Alternate*)

GUATEMALA:
- Dr. Enrique López Herrarte (*Delegate*)

HAITI:
- Monsieur Jules Domond (*Delegate*)

HONDURAS:
- Dr. Julián R. Cáceres (*Delegate*)

MÉXICO:
- Señor Dr. don Antonio Carrillo Flores (*Delegate*)
- Doctor Raúl Ortiz Mena (*Alternate*)
- Señor Francisco Sáenz (*Alternate*)

NICARAGUA:
- Dr. Guillermo Sevilla Sacasa (*Delegate*)
- Señor Alfredo J. Sacasa (*Alternate*)

PANAMÁ:
- Señor Julio E. Heurtematte (*Delegate*)

PARAGUAY:
- Doctor César R. Acosta (*Delegate*)

PERÚ:
- Señor don Carlos Alzamora (*Delegate*)

UNITED STATES:
- Mr. Paul C. Daniels (*Delegate*)
- Mr. H. Gerald Smith (*Alternate*)

URUGUAY:
- Señor don Juan F. Yriart (*Delegate*)

VENEZUELA:
- Señor Dr. M. A. Falcón Briceño (*Delegate*)
- Señor Dr. A. Casas Briceño (*Alternate*)

Special events at the Pan American Union

From November 25 to December 9, 1947, the Pan American Union was the scene

of an interesting exhibit of 40 photographs, depicting the celebration of St. John's Day in the Barlovento region of Venezuela. These striking pictures, taken by Francisco Edmundo Pérez, photographer for the Caracas newspaper *El Nacional*, bring to life the African rites preserved by the Negroes of Barlovento and incorporated in the ancient European celebration of the Day of St. John the Baptist, which falls on June 24.

Sr. Pérez made his documentary study—including shots of the dancers, the mammoth drums and the processions—in June 1946, in the village of Curiepe, District of Brión. The photographs were originally exhibited in Caracas and were shown for the first time in the United States at the Pan American Union, under the auspices of the Venezuelan Bureau of Folklore Research.

As a complement to the exhibit, Olga Briceño, Cultural Attaché of the Venezuelan Embassy, delivered a lecture at the Pan American Union on December 2, describing the feast of St. John's Day in the Barlovento region.

A one-man show of paintings in tempera by the self-taught Brazilian artist, Carlos Prado, took place at the Pan American Union between December 10 and January 5. Sr. Prado is outstanding among the group of contemporary painters of São Paulo, Brazil, for his mastery of tempera. Besides many canvases of typical Brazilian landscapes, local types, and village street scenes, he has painted a number of frescoes in private homes.

On Sunday afternoon, December 7, Herminia Raccagni, noted Chilean pianist, gave a concert at the Pan American Union, under the sponsorship of the Chilean Ambassador and Señora de Nieto del Río. Srta. Raccagni is now professor of piano at the University of Chile's National Conservatory of Music, where she completed her studies in 1932. At that time she was awarded the Orrego Carvallo Prize by the University of Chile.

In addition to the numerous concerts which she has given in her own country, Srta. Raccagni has also played in Brazil, Argentina, and Uruguay. She has performed in chamber music ensembles, as well as in solo recitals, and with Chile's National Symphony Orchestra, under a number of conductors.

Srta. Raccagni's concert at the Pan American Union included works by Scarlatti, Bach, Chopin, Scriabin, Poulenc, Villa-Lobos, and by the Chilean composers Alfonso Leng and Domingo Santa Cruz.

Pan American *News*

National Economic Council in Bolivia

A recent Bolivian decree provided for the establishment of a National Economic Council to assist the Government in solving the country's pressing economic problems. This Council will be of an interim nature, serving until the Constitution is amended so as to provide for a permanent one. The seven members of the Council will be specialists in the problems of mining, agriculture, industry, national administration, taxation, social welfare and labor, and banking and credit. They will be appointed by the President through the Ministry of the Treasury.

The main job of the Council will be to work out a coordinated plan designed to increase the Government's income; bring about a better and more efficient use of the country's economic resources; harmonize the different factors of production; raise the standard of living of the people; and stimulate private industry. To help it succeed in this monumental task the Council is to receive broad powers. All government agencies, as well as semi-private and private organizations, will be obliged to supply it with any information it requests. In addition government agencies will have to appoint members of their staffs to help carry out the Council's undertakings. Recommendations of the Council will be considered by the Cabinet and those that are approved will be incorporated in decrees or bills.

Any administrative problems related to the country's economy will be considered by the Council. It will pass on economic and financial projects of the Executive branch of the Government before they are sent to Congress, and will go over all national and department budgets before they are presented to Congress or to the President.

Dominican Central Bank and currency changes

A gold-backed peso is the recently adopted Dominican monetary unit, supplanting the American dollar which has been the only legal tender in the Dominican Republic for thirty years. The first peso was presented to President Trujillo by Jesús M. Troncoso, governor of the new Central Bank, on October 21, 1947.

Administration of the currency is one of the functions of the Central Bank created under a law signed by President Trujillo on October 9, 1947. The policies to be pursued by the Central Bank will be determined by a six-member Monetary Board, composed of the Secretary of State for the Treasury and Public Credit, the governor of the Bank, and four experts in various fields of finance. Formulation of monetary, credit, budget, gold- and securities-purchase, and interest policies for the Central Bank, direction of its internal activities, and consideration of means for carrying out the banking laws are the province of the Monetary Board. The Central Bank in function and organization was patterned after the Federal Reserve System of the United States.

The new bank notes are backed by $2,000,000 in gold and by $48,215,000 in United States dollars. They circulate at present in denominations of one, five, and ten pesos, bearing respectively likenesses

of Juan Pablo Duarte, Francisco del Rosario Sánchez, and Ramón Matías Mella, the three heroes of Dominican independence. Conversion is to be gradual. Bank notes of both countries will circulate with equal value until the peso has won acceptance; then the dollar will be withdrawn as legal tender, but will still be freely interchangeable with the peso. As a final step, the dollar will become available only as foreign exchange.

The introduction of the new banking system and a national currency was made in order to give the Dominican Republic greater control over its own economy, and to concentrate dollar reserves for use in international trade.

Venezuela's program for improvement of port areas

The National Constituent Assembly of Venezuela has approved the plan presented to it by the Ministry of Finance for enlarging and improving the port facilities in La Guaira, Maracaibo, and Guanta. It is estimated that the entire project will cost about $60,000,000, half of which amount will be sought through a ten-year foreign loan and the remainder furnished under the national budget.

In addition to the work which will be done on the ports themselves, the appropriation will also finance the construction of living quarters for the port workers in the areas mentioned and the dredging of a canal at the entrance of Lake Maracaibo.

It is generally felt that this program will contribute greatly to Venezuela's commercial development, since, for one thing, it will alleviate the congestion which has existed in the ports for some time and make it possible for them to handle the tremendous volume of trade now moving into the country from abroad. According to the Ministry of Finance, Venezuela's foreign trade needs are at present far above the capacities of her ports.

The proposed Lake Maracaibo Canal (35 feet wide) would also be a considerable advantage to Venezuelan commerce, since it would permit the passage of 115,000-barrel oil tankers, instead of the smaller ones now in use, and eliminate the need of an oil pipeline to serve the rich oil fields on Lake Maracaibo. Furthermore, it is expected that the canal would develop a number of different trade interests, inasmuch as it would be open to all types of shipping, and provide direct access from Maracaibo to the outside world, as well as to other Venezuelan ports.

Committees of Standards for Mexican industry

An address by Señor Antonio Ruiz Galindo, Secretary of National Economy, marked the opening on November 5, 1947 of a campaign to improve the quality of production. Señor Ruiz Galindo asserted that such a program was an integral feature of Mexico's dual aims of promoting industrialization and increasing foreign trade. He further pointed out the necessity of inspiring confidence in Mexican trademarks both within the country and in the world market.

Eighteen Committees of Standards, headed by a board of directors, have the responsibility for the new program. They are composed of representatives of the national chambers of commerce and industry, the chamber for each of the eighteen industries for which a committee was formed, and the Department of National Economy. Every aspect of the various industries is to be studied; the committees will work to establish universally accepted terminologies, fix quality levels to be met by manufacturers, and

set up standards for methods of production.

Señor Ruiz Galindo analyzed the major problems confronting workers for the betterment of Mexican industry—modernization, in many cases, of antiquated plants and equipment, fair labor standards to encourage workers' interest in their jobs, and education of consumers to a habit of demanding high-quality merchandise. He concluded by declaring the Committees of Standards officially installed, "with confidence in the fruitful and effective results of your labor."

Guatemalan import tariff

A recent measure adopted by Guatemala to improve its import-export balance is a new tariff which went into effect on November 28, 1947. The decree doubles the duty on goods from countries with which Guatemala had an unfavorable trade balance of more than 75 per cent, based on value, during the year preceding importation of the goods in question. Specific exemptions from the rise in rates—including all imports from other Central American countries—are listed in the law, and the Ministry of Finance and Public Credit is empowered to add to these any commodities considered vital to the national economy.

Among those products that, regardless of their country of origin, will be permitted entry under the lower tariff are certain spices, tea, hemp and jute products, malt and hops, yarns, vegetable fats, and gums and resins. Tariff laws of 1935, 1936, and 1939 are superseded by the November 1947 decree.

Brazilian hydroelectric project

A prominent Brazilian engineer, Senhor A. J. Alves de Souza, has been appointed by the Ministry of Agriculture to organize the São Francisco Hydroelectric Company which was provided for by a law of 1945. This company will be owned partly by the Federal Government and partly by private individuals. Senhor Alves de Souza's main job will be to construct a hydroelectric plant at the Falls of Paulo Afonso, located about 150 miles up the São Francisco River. Completion of this plant will mean that a large area of northeast Brazil can be brought into agricultural production through irrigation.

Protection for Guatemalan weavers

The government of Guatemala has taken steps to protect native Indian weavers against commercial imitations of their product. In a decree which went into effect on November 8, 1947, the National Indian Institute, a division of the Ministry of Economy and Labor, was empowered to organize in each native community a three-man Committee for the Control of Indian Fabrics to patent genuine Indian textile designs, and to label them with an official guarantee.

Traditionally, Indian textiles, and the way in which they were worn, were like books from which a tremendous amount of information could be read. Each tribe had its own symbol, and the aristocracy had exclusive family designs as well. Ceremonial robes bore distinctive figures. The specific purpose of each cloth was likewise identifiable, and rules of design and dress were laid down by priests of the tribes. Each village had its own method of weaving, and a wide range of textures was developed; designs were applied in a variety of ways—woven into the fabric, painted on with dyes, embroidered by cross-stitching or any number of other stitches, or appliquéd. As work was done on primitive hand looms, the cloths took on individualities character-

O. I. A. A.

A GUATEMALAN WEAVER

The Guatemalan Government hopes to protect the Indians in the practice of their ancient craft of weaving.

istic of the weaver. Spinning, dyeing with rich colors obtained from plants, sea animals, or insects, and weaving made completion of a single piece a slow process; but a garment would last for years and grow more beautiful with use. The Spanish introduced the foot loom, making possible faster production, but also insisted on the use of symbols significant to them, which the Indians incorporated into the old tribal patterns. Today, with roads and swift transportation, designs are being exchanged among the clans, and ordinary dress is gradually displacing the old costumes.

Provision has been made in the new law for a study of Indian designs in order to obtain a complete collection for purposes of registry; original creations of Indian weavers are similarly protected. Textile manufacturers using patterns so registered are subject to prosecution under the patent laws. No factory-made cloths, Guatemalan or imported, which masquerade as Indian weaves may be sold within the country, or to foreign markets.

Ecuador receives loan for waterworks

The Export-Import Bank has granted a $4,000,000 loan to the municipal government of Quito, Ecuador, so that it can go ahead with its plans for increasing the city's supply of drinking water. On August 22, 1947, the Quito City Council signed a contract with an American engineer for the construction of an adequate

distribution system to alleviate the scarcity of potable water, but initiation of the project had to await approval of the Bank, which did not come until six weeks later.

The engineer will receive a total sum of $110,500 for his work, and under the terms of the contract, will supervise the functioning and maintenance of the new water system for two years after its completion. It is expected that the project will be finished within the next three years and that it will supply Quito with pure water at the rate of from 400 to 500 gallons a second.

Inter-American fellowships

The Convention for the Promotion of Inter-American Cultural Relations is a treaty agreement signed by all the American republics at Buenos Aires in 1936, and provides for the annual exchange of two graduate students or teachers between each of the participating countries. Besides the United States, the following American countries have ratified the Convention: Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Venezuela. Under the terms of the Convention, the government awarding the fellowships provides tuition, subsidiary expenses, and maintenance at an institution of higher learning, while the nominating government or the student pays travel expenses. The fellowhsips are for one year's study, and are occasionally renewable for a second year.

Students from other American republics first studied in the United States under the terms of the Convention in the fiscal year 1941, when Convention fellowships were awarded to fourteen students representing Chile, Costa Rica, the Dominican Republic, Haiti, Nicaragua, Panama and Paraguay. Up to the present time a total of 174 students from other American nations have received such fellowships for study in the United States.

Thirty United States students traveled to the other American republics under the Convention between 1940 and 1943. During the war this activity was suspended, but negotiations are now in progress with the signatory governments for its resumption. It is hoped that it will soon be possible for the Convention program to assume again its reciprocal nature and that opportunities for fellowships will again be available annually to United States students.

The program is administered by the United States Office of Education.

Fellowship Recipients under the Convention for the Promotion of Inter-American Cultural Relations During the 1947 Fiscal Year

Country	Name	Field of Study	Institution
Bolivia	Humberto Gandarillas	Plant genetics	University of Minnesota
Bolivia	Alfonso Linares	Gastroenterology	Geo. Washington University
Brazil	Flavio Aprigliano	Otolaryngology	Harvard Medical School
Brazil	Cecilia de Castro e Silva	Education	Univ. of Michigan
Chile	Lidia Rosenthal de Barrera	Teaching of English	University of Michigan
Chile	Salomon Wexman Budnik	Organic synthetic chemistry	University of Illinois

Fellowship Recipients under the Convention for the Promotion of Inter-American Cultural Relations During the 1947 Fiscal Year—Continued

COUNTRY	NAME	FIELD OF STUDY	INSTITUTION
Colombia	Victoria Bossio [1]	Education	Columbia University
Colombia	Catalina Restrepo [1]	Education	Indiana State Teachers College
Colombia	Marco Tulio Salgado	Educational administration	Ohio State University
Costa Rica	Maria Isabel Jimenez	Education	Univ. of California
Costa Rica	Alfredo Ruiz S.	Agricultural statistics	Michigan State College
Dom. Republic	Angel Romero Beltre [2]	Surgery	University of Chicago
Dom. Republic	Cosme A. Gomez [1]	Gynecology	Medical College of Virginia
Guatemala	Angel Ramirez M.	Elementary education & children's literature	Peabody College for Teachers
Haiti	Roger R. Loubeau	Taxation & internal revenue	University of Chicago
Haiti	Jean-Marie Vorbe	Highway construction	Iowa State College
Honduras	Jose R. Lardizabal Sanchez	Dentistry	Northwestern University
Honduras	Carlos Agurcia Cervantes [2]	Medicine	Not yet placed
Mexico	No panel submitted		
Nicaragua	Olga Nuñez Abaunza [1]	International relations	School of Advanced International Studies, D. C.
Nicaragua	Oswaldo Arostegui [2]	Infant diseases	Harvard Medical School
Panama	Diogenes Arosemena	Penology & sociology	Catholic University of America
Panama	Libertaria Gonzalez de Cohn	Education of exceptional children	Teachers College, Columbia University
Paraguay	Eduardo A. Bestard	Orthopaedic surgery	Univ. of Pennsylvania
Paraguay	Celia Arias [1]	Educational psychology	Columbia University
Peru	Luisa Esperanza Novoa [1]	Educational psychology	Teachers College, Columbia University
Peru	Jorge Martinez M.	Library science	University of Chicago
Peru	Guillermo Aguilar	Vocational guidance & administration	University of Indiana
Venezuela	Luis Felipe Dominguez	Internal medicine, endocrinology	New York University
Venezuela	Oscar Colmenares-Pacheco [3]		

[1] Renewal from 1946 fiscal year.
[2] Alternate selected to replace first student chosen, who declined award.
[3] Declined.

Housing plans for the Mexico City area

Fernando Casas Alemán, Chief of the Department of the Federal District of Mexico, announced recently that about $20,000,000 has been allotted for low-cost housing in the district. Plans have been drawn up for a number of apartment buildings (400 units) and individual homes, and construction was scheduled to begin in the middle of January. The one-family houses will be bought by the tenants through monthly rent-like payments. A

model project already well under way is to house employees of the Department of the Federal District. The first hundred dwellings in what is called the "Garden City" are almost ready for occupancy, and another thousand are to be erected.

The UNESCO Conference in Mexico

A welcoming address by President Miguel Alemán of Mexico at the Palace of Fine Arts opened the second annual conference of the United Nations Educational, Scientific, and Cultural Organization, which was held from November 6 to December 3, 1947. The President in his speech referred to Bolívar's concept of education, and praised UNESCO as its major exponent in the broader field of the world, as he said, "To [UNESCO] has been assigned the specific task which, in its widest scope, may be the most important in international union: to create a mentality for peace that will be second nature to men." The delegates—outstanding representatives of the cultural life of 48 countries—unanimously elected Dr. Manuel Gual Vidal, Mexico's Secretary of Education, to serve as president of the Conference.

Also on November 6, a ceremony marked the official opening of the modernistic Normal School building in Mexico City. President Alemán addressed the cheering students and made a tour of inspection. The colorful flags of the United Nations lined the front of the building; and its auditorium was for the next month the seat of the UNESCO Conference. At the final session of the Conference a proposal was made by William Benton, chairman of the United States delegation, and approved by acclamation, to present to the Normal School a plaque reading: "The Second Session of the General Conference of UNESCO met here November 6–December 3, 1947, under the beneficent influence of Benito Juárez, whose words were: 'Peace is founded on respect for the rights of others.' "

Brazilian vocational school principals

Ten vocational school principals from Brazil arrived at La Guardia Airport in New York on September 3, 1947, the first of two groups of educators being brought to the United States for special training courses and acquaintance with industrial education programs in this country, according to the terms of a project under the Cooperative Industrial Education Program of Brazil, developed by the Inter-American Educational Foundation, Inc. (now the Educational Division of the Office of Inter-American Affairs).

The group was composed of principals of schools in Rio de Janeiro, Paraíba, Maceió, Pelotas, São Luiz, Belém, Vitória, Fortaleza, and Curitiba. Their schedule, covering a period of approximately three months, included a two weeks' visit to New York City and trade schools in Connecticut, a series of eight courses at Pennsylvania State College and visits to the Ford Motor Company plant in Detroit, the David Rankin Vocational School in St. Louis, and various trade and technical schools in Chicago. Before returning to Brazil, they called at the Pan American Union and later attended the American Vocational Association Convention in Los Angeles.

Forty Brazilian vocational school instructors are taking courses in the United States.

Workers' University in Venezuela

On October 9, 1947 the Constitutent Assembly of Venezuela passed a law

creating a National Workers' University in Caracas. Functioning autonomously under the Ministry of Labor, this new institution will be provided with its own funds, and will not be dependent upon the national budget. Its purpose is to investigate economic, social, and cultural problems affecting workers, organize courses, conferences, demonstrations, and exhibits, and publish material designed to raise the general cultural level of the Venezuelan worker. Whatever information the University gathers will be disseminated to the public.

Art and literature awards in Argentina

September 21, 1947 saw the opening of the Thirty-Seventh National Art Exhibition in Buenos Aires, Argentina, with a total of 232 paintings and 86 pieces of sculpture.

The grand prize for the best painting in the entire show was awarded to Francisco Bernareggi for his oil entitled *Tarde en la Quinta* (Afternoon on the Farm). Raúl Soldi received first prize for *Sarita*, a portrait, while second and third prizes went to Roberto Azzoni and César López Claro respectively for *Bajo los Olivos* (Under the Olives) and *El Ombú*. (The ombú is a favorite tree, whose shade is especially appreciated on the pampas.)

Another event of interest in the cultural field was the awarding of prizes, on September 19, 1947, for the best poetry and prose written in Buenos Aires during the year 1946. Mario Binetti won the first poetry prize for a work entitled *La Lumbre Dormida* (The Sleeping Fire). A native of Buenos Aires, Sr. Binetti, though only 31 years old, has already distinguished himself as a man of letters. Aside from his writing career (two other volumes of his poetry have previously been published), he also holds a professorship at the University of Cuyo, where he conducts courses in literature and composition.

Julio Ellena de la Sota, who was given the prose award for his book *Persecución de Gladys*, is another young Argentine author of merit. Most of his writing has been devoted to the short story, but he is also well known in Argentine literary circles for his ability as a translator of foreign works.

Faculty club for Caracas College of Medicine

A building is to be erected in Caracas, Venezuela for the exclusive use of the College of Medicine faculty, which, up until now, has been handicapped by the lack of suitable quarters in which to hold its professional and social functions. When completed, therefore, the new building will serve the double purpose of providing a place for medical staff meetings and discussions, as well as a recreation center for members of the College and visiting guests.

Construction plans call for an assembly hall with a seating capacity of 250, a library, a special meeting room for the executive council of the College, a restaurant, and a large hall suitable for such functions as receptions, dances, and concerts. Other attractive features on the College grounds will include two swimming pools, tennis courts, bowling greens, and a children's playground.

We see by the papers that—

• Persian lambs are raised in *Argentina* and their skins processed into furs of fine quality.

• Noting that stiff fines have not halted infractions, *Mexico* has decided to impose jail sentences of from one to fifteen days on shopkeepers violating the ceiling-price laws. Second offenders will be liable to longer terms. Controls are in force on such necessities as meat, milk, bread, and tortillas.

• *Venezuela* was the largest exporter of crude petroleum in the world during the year 1946. This is according to the figures given by the United States Department of the Interior in *International Petroleum Trade*, October 31, 1947, which shows Venezuela's petroleum exports for 1946 totaling 348,383 barrels. The United States was in second place for the same period, with a total petroleum shipment of 42,574 barrels. While it is stated that the figures are provisional, final data are not expected to alter the relative positions.

• A Coordinating Committee of Exportation has been created in *Argentina*, under the Ministry of the Treasury, to expedite shipment of agricultural products, especially cereals and vegetable oils. The aim of this new Committee is to eliminate red tape at the ports and to coordinate the activities of the various officials in charge, so that produce may be loaded on ships with as little delay as possible. The Committee's first session was held on September 26, 1947, with the Minister of the Treasury presiding.

• Plans are being drawn up in *Peru* for the establishment of a National Institute to Combat Foot-and-Mouth Disease. Peru, like Mexico, has been trying in recent months, by every means at its disposal, to halt the growing menace of this dreaded killer of cattle. The new Institute will prepare the serums and vaccines needed to stamp out the disease, and will carry on an intensive research program on virus-caused diseases in general. The Ministry of Development and Public Works has been authorized to prepare blueprints for a building to house the Institute.

• Armed with tons of DDT in and out of solution, *Brazil's* National Malaria Service launched last November an intensive 50-day campaign against malaria in the State of Rio de Janeiro. A total of 17,635 square miles in which live 710,000 people will be affected by the campaign. The Brazilians, with their usual ability to find just the right word for things, call it a *campanha de dedetização*—DDT-zation campaign.

• Final details have been completed for an extensive hotel construction program in *Venezuela*, which will see modern hotels rising in half a dozen cities. The hotels will be erected in Caracas, Aguas Calientes, Puerto de la Cruz, Ciudad Bolívar, Puerto Cabello, and Porlamar, and will be operated by the Intercontinental Hotel Corporation. One third of the capital necessary for this building program will be supplied by the Venezuelan Government, and the remainder by private shareholders.

• The Export-Import Bank announced on December 8, 1947, a loan of $13,000,000 to *Mexico*. The credits are earmarked for purchase in the United States of machinery and other materials to improve the Mexico City-Veracruz railroad, to complete two sugar refineries now under construction, and to equip new meat canneries which are being established in the northern part of the country. A substantial proportion of Mexico's canned-meat output will be bought by the United States for shipment to other countries.

• The new School of Journalism at the Central University in Caracas, *Venezuela*, was inaugurated on October 24, 1947. The President of the Republic, as well as a number of other leading Government officials, attended the opening ceremony.

• The *Uruguayan* Council of Ministers has authorized the Government's purchase of from 150 to 200 pieces of farm machinery from the United States, including harvesters and threshing machines. This action was taken at the suggestion of the President and the Ministry of Agriculture and Stockraising, in view of Uruguay's critical need of such equipment.

• Work has begun in Quito, *Ecuador*, on a new series of university buildings, which, when completed, will serve as an extension of the present Central University. The breaking of ground for the Administration Building was marked by a formal ceremony, held on October 27, 1947, and attended by the President of the Republic. A steel capsule, containing documents relative to the history of the university, together with copies of the local newspapers, describing the ceremonial exercises, was deposited in the foundation of the building.

• A medical museum is being established at the National University of *Mexico*, under the direction of Dr. Numa Spínola. The history of Mexican medicine from antiquity to the latest scientific developments will be traced in its exhibits. Hospitals, medical associations, state governments, medical-supply houses, and libraries have been invited to contribute displays.

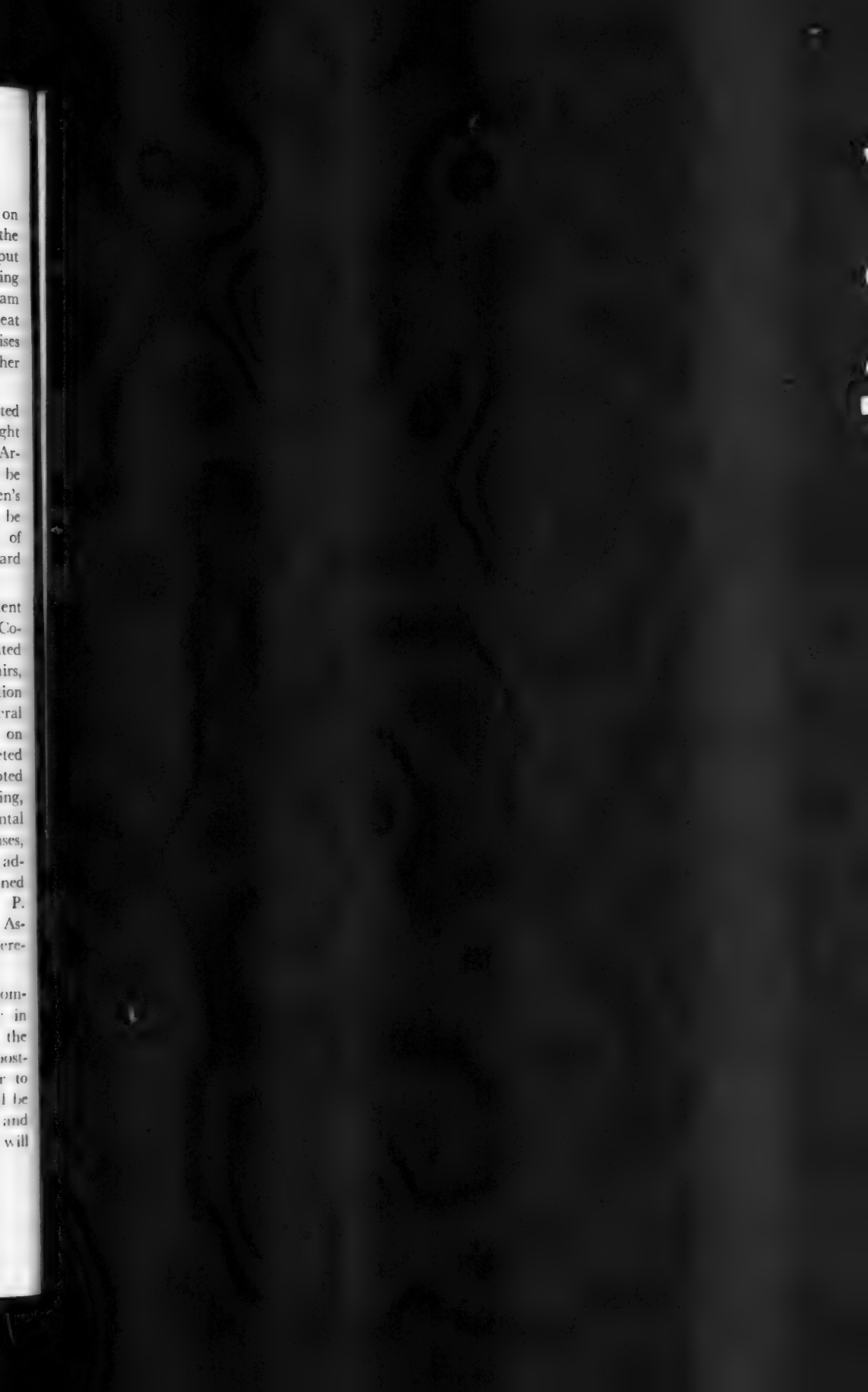
• The historic Arch of Saint Catherine in Antigua, *Guatemala*, has been reconstructed under the architectural supervision of Rodolfo Galeotti Torres. The original arch was crumbling under the weight of years of neglect, and of a shack which had been erected over it. The structure has been reinforced with concrete, and the new tower follows the style of baroque churches in the colonial city.

• What may be a new volcano in the Federal District of *Mexico* is drawing geologists to the village of San Lorenzo. The phenomenon was first noticed on November 23, 1947, by residents of the area who called the fire department to put out trees that seemed to be burning spontaneously. Investigators found steam rising from the ground and scorching heat at a slight depth. Subterranean noises have added force to the belief that another Parícutin may erupt on the spot.

• The *Argentine* Senate has appropriated a fund of about $5,000,000 to fight communicable diseases throughout Argentina. Part of this amount will be dedicated to the construction of a children's hospital in Buenos Aires, which will be used exclusively for the treatment of communicable cases, with a special ward for infantile paralysis patients.

• A joint project of the *Mexican* Department of Health and Assistance and the Cooperative Health Service of the United States Institute of Inter-American Affairs, the first Health Unit and Training Station of a number planned for the Federal District was opened at Xochimilco on October 21, 1947. This unit, completed at a cost of about $35,000, will be devoted to epidemiology, sanitary engineering, maternal and infant hygiene, dental treatment, treatment for social diseases, and anti-tuberculosis measures. In addition, nurses and doctors are to be trained for work in the field. Dr. Rafael P. Gamboa, Secretary of Health and Assistance, presided at the opening ceremonies.

• The *Guatemalan* National Literacy Committee will hold its 1948 book fair in February in the Centenary Park of the capital city. This exhibition was postponed from last September in order to avoid the rainy season. Concerts will be held in the band shell of the park; and several other American countries will contribute displays.



PUBLICATION OF THE PAN AMERICAN UNION, WASHINGTON, D. C.

BULLETIN OF THE PAN AMERICAN UNION

Annual subscription rates in all countries of the Pan American Union: English edition, $1.50; Spanish edition, $1.00; Portuguese edition, $1.00; single copies, any edition, 15 cents each (prior to 1935, 25 cents each). An additional charge of 75 cents per year is made on each edition for subscriptions in countries outside the Pan American Union

THE INTER-AMERICAN SYSTEM—25 cents

THE AMERICAS: A PANORAMIC VIEW—10 cents

AMERICAN NATIONS AND CAPITALS (illustrated)—10 cents each

Argentina—Brazil—Chile—Colombia—Costa Rica—Cuba—Dominican Republic—El Salvador—Guatemala—Haiti—Honduras—Mexico—Nicaragua—Panama—Peru—Uruguay—Venezuela—Asunción—Bogotá—Caracas—Habana—La Paz—Managua—Mexico City—Montevideo—Panama City—Rio de Janeiro—San José—Santiago, Chile—Tegucigalpa. (Others temporarily out of print)

AMERICAN COMMODITIES (illustrated)—10 cents each

Cacao—Coffee—Copper—Quinine—Rubber—Sugar—Tagua—Tin—Tonka Bean—Yerba Mate

SERIES FOR YOUNG READERS (illustrated)—5 cents each

José de San Martín—The Araucanians—Francisco Pizarro—Cabeza de Vaca's Great Journey—Five Birds of Latin America—Simón Bolívar—The Aztec People—Hernán Cortés—The Pan American Sanitary Bureau—José Gervasio Artigas—The Amazon River—Colonial Cities of Spanish America—Transportation in the Other Americas—José Martí—The Snake Farm at Butantan, Brazil—The Pan American Highway—The Guano Islands of Peru—The Panama Canal—The Incas—The Pan American Union

MUSIC SERIES

Partial List of Latin American Music Obtainable in the U. S., $0.20; 14 Traditional Spanish Songs from Texas, $0.30; Notes on the History of Music Exchange between the Americas, $0.25; Carlos Chávez: Catalog of His Works, $0.50; Selected References in English on Latin American Music, $0.10; El Estado Presente de la Música en México, The Present State of Music in Mexico, by Otto Mayer-Serra, $0.50

COMMERCIAL PAN AMERICA—$1.00 a year (mimeographed)

FOREIGN TRADE SERIES—$1.50 for twelve numbers

Surveys of the foreign commerce of the Latin American nations, presented in detailed statistical tables

PANORAMA—10 cents a copy

A record of cultural events in the Americas (mimeographed)

CONTEMPORARY ARTISTS OF LATIN AMERICA (illustrated)—50 cents a copy

Mario Carreño—Diego Rivera

THE PAN AMERICAN BOOKSHELF—$1.00 a year

A monthly annotated list of the books received in the Library of the Pan American Union

A COMPLETE LIST AND PRICES OF ALL PAN AMERICAN UNION PUBLICATIONS WILL BE SENT ON REQUEST

U. S. GOVERNMENT PRINTING OFFICE: 1949